Suid-Afrikaanse Tydskrif vir Geneeskunde
South African Medical Journal

Posbus 643, Kaapstad — P.O. Box 643, Cape Town

Kaapstad, 23 Februarie 1957 — Weekliks 2s. 6d. — Vol. 31 No. 8 — Cape Town, 23 February 1957 — Weekly 2s. 6d.

VAN DIE REDAKSIE

DIE ATARAKTIESE MIDDELS (BEDAARMIDDELS)

Sedert die daarstelling van chloorpromasien in 1956 het die gebruik hiervan en ander ataraktiese middels (bedaarmiddels) in sielsiekehospitale en klinieke grootliks toegeneem en 'n definitiewe plek by die beheer en terapie van psigotiese pasiënte ingeneem. By sekere soort gevalle volg 'n opvallende vordering op behandeling met hierdie middels en die verbetering is soms dramaties. In 'n onlangse toespraak[1] het dr. Ginsburg, Internis-Superintendent, Fort Napier-Hospitaal, Pietermaritzburg, die gedaantewisseling wat nou in toestande in sielsiekehospitale plaasvind en die verbeterde prognose by die behandeling van sekere soorte psigotiese pasiënte, gedeeltelik toegeskryf aan die gebruik van ataraktiese middels, alhoewel hy teen oordrewe verwagtinge gewaarsku het. Daar is nog baie om te leer aangaande die werking van hierdie middels en, het hy gesê, hulle vervang nie sulke terapeutiese metodes soos bv. insulien-behandeling en elektropleksie nie.

Alhoewel die daarstelling van chloorpromasien deur dié van baie ander bedaarmiddels gevolg is, bly dit nogtans die ataraktiese middel wat voorkeur geniet by die behandeling van psigoses en in sielsiekehospitale word dit op groter skaal as ander ataraktiese middels gebruik. Dit is ook van waarde by die behandeling van neurose en psigoneurose, maar hier word die ander ataraktiese middels op 'n taamlike groot skaal gebruik, en dit word oor die algemeen beskou dat hulle 'n waardevolle toevoeging tot ons terapeutiese bewapening uitmaak. Meprobamaat (Miltown, Equanil) het 'n vername plek by sodanige behandeling ingeneem, en gedurende die afgelope 12 maande is kliniese proefnemings van sy mondelinge aanwending vanaf die VSA, Frankryk en die VK gerapporteer. In die jongste gepubliseerde verslae het West en Da Fonseca[2] die waarde daarvan bepaal by 151 gevalle van beide geslagte wat by die psigiatriese buitepasiënte-klinieke van 'n Londense hospitaal behandel is. Die voorgeskrewe dosis het van 400 mg. tweemaal daagliks tot 800 mg. driemaal daagliks gevarieer en die gevalle is opgevolg vir periodes wat van veertiendae tot 18 weke gewissel het. Oor die algemeen beskou, was hulle resultate

EDITORIAL

THE ATARACTIC DRUGS (TRANQUILLIZERS)

Since the introduction of chlorpromazine in 1951 the use of this and other ataractics (tranquillizers) at mental hospitals and clinics has grown to very large proportions and taken a definite place in the management and therapy of psychotic patients. In certain classes of case a marked improvement follows treatment with these drugs and sometimes the response is dramatic. Dr. Ginsburg, Physician Superintendent, Fort Napier Hospital, Pietermaritzburg, in a recent address,[1] attributed the metamorphosis that is taking place in conditions in mental hospitals, and the improved prognosis in the treatment of certain classes of psychotic patients, in part to the use of ataractic drugs, though he uttered a warning against exaggerated expectations. There was still much to be learnt about the action of these drugs, and, he said, they had not replaced such therapeutic procedures as insulin treatment and electropexy.

Although the introduction of chlorpromazine has been followed by that of many other tranquillizing drugs, it remains the ataractic of choice in the treatment of psychoses, and in the mental hospitals it is used on a greater scale than other ataractics. It is also of value in the treatment of neuroses and psychoneuroses, but here the other ataractics are used on a considerable scale and they are generally regarded as a valuable addition to our therapeutic armamentarium. Meprobamate (Miltown, Equanil) has taken a prominent place in such treatment, and in the past 12 months clinical trials of its oral administration have been reported from the US, France and the UK. In the most recent report published, West and Da Fonseca[2] assessed its value in 151 cases of both sexes, who were treated at the psychiatric out-patient clinics of a London hospital. The dosage prescribed varied from 400 mg. twice daily to 800 mg. thrice daily, and the cases were followed up for periods varying from a fortnight to 18 weeks. Reviewed broadly, their results were not so good as those of Selling[3] and Borrus,[4] the American investigators, and this fact may assume importance, for their series was 3 times the size of either of the American ones.

nie so goed soos dié van Selling[3] en Borrus,[4] die Amerikaanse navorsers, nie en hierdie feit mag van belang wees daar hulle reekse 3-maal so groot soos enige van die Amerikaanse reekse was.

Meer as 60 van West en Da Fonseca se 151 pasiënte het aan angs- en spanningstoestande gely en gekla dat hulle ‚vasgebind voel binnekant', ‚nie in staat is om te ontspan nie' en nie in staat is om te slaap nie. Die essensiële kenmerk van die reekse was dat al die pasiënte 'n sekere mate van spanning ervaar het. By sommige het dit die vorm van ‚vrees' of vrees van onbekende oorsprong aangeneem, of histeriese reaksies soos bv. afonie, globus hystericus of swerfsiektes, waar angs nie 'n vername kenmerk was nie. West en Da Fonseca het gevind dat 58% van hierdie groep op meprobamaat verbeter het (vergeleke met Selling se 95% of Borrus se 78%); ‚(die middel) help gespanne en angstige pasiënte om aan die slaap te raak sonder dat hulle ander medisyne hoef te gebruik'.

In 'n vergelyking met barbiturate het al Selling se pasiënte —wat voorheen op natrium-amilobarbitoon was—meprobamaat verkies, maar toe West en Da Fonseca blindweg vergelykende proewe met 38 pasiënte uitgevoer het, het 17 (45%) gevra om terug te keer na die middels wat hulle voorheen gebruik het. Aangesien hierdie keuse aan vooroordeel of toeval te wyte mag gewees het, het West en Da Fonseca 'n verdere ondersoek ingestel waar nòg dokter nòg pasiënt geweet het watter middel toegedien is. Hier was die resultate so teenstrydig—10 pasiënte het baat gevind van natrium-amilorbarbitoon, 9 van meprobamaat en almal tot 'n sekere mate van een van die twee middels—dat hulle tot die gevolgtrekking gekom het dat ‚as een van die twee middels *vir kort periodes* gegee word aan pasiënte wat aan angs en spanning ly, ongeveer dieselfde mate van baat ondervind sal word'. Sommige psigologiese toestande reageer blykbaar geheel en al nie gunstig op meprobamaat nie, soos byvoorbeeld spanningshoofpyne en duidelike somatiese angstoestande wat deur bewing, sweet en tachikardie, skrywerskramp of histeriese kramp geopenbaar word. Hierdie toestande meng met ernstiger psigiatriese ongesteldhede, soos bv. ernstige angstoestande en die psigoses, en baie navorsers reken dat meprobamaat hier van weinig waarde is. Dit is nog te vroeg om die vergelykende waarde van die middel naas die barbiturate te bereken wanneer dit oor lang periodes toegedien word.

In algemene praktyk word die goed-gevestigde oorhand van die barbiturate ernstig uitgedaag deur die spesifieke bedaarmiddels, hierdie onlangse toevoegings tot die middels wat kalmeer en emosionele spanning verminder. In die VSA het Miltown en Equanil alreeds alledaagse name geword wat met vasberadenheid onder die aandag van die publiek gehou word deur kragtige verkoopstegniek in die pers, televisie en radio. ‚Yes, we have Miltown' lui 'n advertensie buitekant 'n Los Angeles ‚drug-store',[5] en dit word verklaar dat meprobamaat (waarvan Miltown 'n handelsnaam is) binne 4 jaar die 4de mees algemene middel geword het wat in die VSA voorgeskryf word.[2]

1. Ginsburg, M. (1957): S. Afr. T. Geneesk., **31**, 175.
2. West, E. D. en Da Fonseca, A. F. (1956): Brit. Med. J., **2**, 1206.
3. Selling, L. S. (1955): J. Amer. Med. Assoc., **157**, 1594.
4. Borrus, J. C. (1955): *Ibid.*, **157**, 1596.
5. Van die Redaksie (1956): Brit. Med. J., **2**, 1227.

Over 60 of West and Da Fonseca's 151 patients were suffering from anxiety and tension states, complaining of 'being strung up inside', 'unable to relax' and unable to sleep. The essential feature of the series was that all the patients were experiencing some sort of tension. In some this took the form of 'phobias' or apprehension of unknown cause, or hysterical reactions such as aphonia, globus hystericus or fugues, where anxiety was not a prominent feature. In this group West and Da Fonseca found that 58% improved on meprobamate (as compared with Selling's 95% and Borrus' 78%); '(the drug) helps tense and anxious patients to get off to sleep without their having to take other medications'.

In a comparison with barbiturates all Selling's patients——previously on sodium amylobarbitone—preferred meprobamate, but when West and Da Fonseca carried out a blind comparative trial in 38 patients, 17 (45%) asked to return to the drugs they had previously taken. Since this choice may have been due to prejudice or chance, West and Da Fonseca carried out a further survey in which neither doctor nor patient knew which drug was being given. Here the results were so equivocal—10 patients benefiting from sodium amylobarbitone, 9 from meprobamate, and all to some extent from either drug—that they concluded that 'if either drug is given *for short periods* to most patients with anxiety and tension about equal benefit will accrue'. Some psychological conditions apparently do not respond at all favourably to meprobamate, e.g. tension headaches and overt somatic anxiety-states manifested by tremor, sweating and tachycardia, writer's cramp or hysterical spasm. These conditions blend with more serious psychiatric disorders, e.g. severe anxiety states, and the psychoses, for which many workers consider meprobamate to be of little value. It is still too early to assess the comparative value of the drug beside the barbiturates when given over long periods.

In general practice the well-established ascendancy of the barbiturates is being seriously challenged by the specific tranquillizers, these recent additions to the drugs that sedate and lessen emotional tension. Already, in the US, Miltown and Equanil have become commonplace names, determinedly kept in the public eye by high-pressure salesmanship in press, television and radio. 'Yes, we have Miltown' reads an advertisement outside a Los Angeles drugstore,[5] and meprobamate (of which Miltown is a trade name) is said to have within 4 years become the 4th most commonly prescribed drug in the US.[2]

1. Ginsburg, M. (1957): S. Afr. Med. J., **31**, 175.
2. West, E. D. and Da Fonseca, A. F. (1956): Brit. Med. J., **2**, 1206.
3. Selling, L. S. (1955): J. Amer. Med. Assoc., **157**, 1594.
4. Borrus, J. C. (1955): *Ibid.*, **157**, 1596.
5. Editorial (1956): Brit. Med. J., **2**, 1227.

THE MEDICAL FACULTY OF THE NATAL UNIVERSITY

The Minister of Education (Mr. J. H. Viljoen), who is also Minister of Health, has announced that the Government intends to separate the Durban medical school for non-Europeans, which constitutes the medical faculty of the University of Natal, from that University, to put it under the control of a Government department, and to make the University of South Africa the examining body which would award degrees. It is understood that this decision has been arrived at on the report of a committee of Government departments and without consultation with the Natal University. The report of the departmental committee has not been published. No further details of the procedure which the Government proposes to adopt have been issued, but the Principal of the University and the medical professors at the head of the seven departments of the medical school have strongly protested against the action that is forecast.

The Natal Coastal Branch of the Medical Association of South Africa at an emergency meeting which was held on 13 February passed a resolution vigorously protesting against the proposed change. A telegram was sent next day to the Minister of Education embodying this protest and intimating that the Branch would find it impossible to cooperate with any authority other than the University of Natal in the staffing of the medical school. A copy of the telegram was communicated to the Chairman of the Federal Council of the Association with a request that the Parliamentary Committee of the Association should be informed (see page 180).

The Natal Coastal Branch took a leading and effective part in the establishment of the Durban Medical School and has consistently supported and cooperated with the Medical Faculty of the Natal University. Its views on the proposed change may therefore be regarded as entitled to serious consideration. The matter has not yet come before the Federal Council of the Association, and it is hardly necessary to add that until this body has considered the subject, the policy of the Association in regard to the proposed change will not have been determined.

As far as we know the Government has not consulted on this matter with the South African Medical and Dental Council; certainly there has been no consultation with the Medical Association of South Africa. It will be recalled that the Association took a leading part in pressing for the establishment in Durban of this medical school for non-Europeans, and that it urged its setting up under the aegis of the Natal University. A succession of resolutions to this effect were passed by Federal Council in Johannesburg in 1945, Durban in 1946, Johannesburg, Bloemfontein and East London in 1947 and Johannesburg in 1948. In February 1947 a committee of Federal Council was set up to further this policy, consisting of Dr. A. B. Taylor (convener), Dr. J. Drummond, Prof. F. Forman (later Dr. L. P. Bosman), Prof. S. F. Oosthuizen and Prof. A. S. Strachan, and when in February 1948 it was announced that the Minister of Education had notified the Natal University College that the Government had adopted the policy, the news was received by Federal Council with acclamation and the responsible Committee congratulated.

The South African Medical and Dental Council will no doubt in due course have this issue under consideration. Under existing legislation the degrees or diplomas which entitle the holders to registration as medical practitioners are prescribed by regulations made by the Government after consideration of the recommendation of the Council. Moreover the details of the minimum curriculum which must be taken by medical students in order to obtain a registrable qualification are laid down in regulations made by the Government after consideration of the recommendation of the Council. These and a number of other provisions in the Medical, Dental and Pharmacy Act constitute the Medical and Dental Council as the authority which advises the Government on the training, registration and conduct of medical practitioners, and it is evident that the views of the Council as the Government's official advisory body will carry great weight in this matter.

So far as the Association is concerned the matter will come before Federal Council at its meeting which is to be held in Johannesburg next month.

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Fundamentals of Clinical Fluoroscopy. With Essentials of Roentgen Interpretation. Second Revised Edition. By Charles B. Storch, M.D. Pp. xiii + 305. 318 Figures. $8.75. New York and London: Grune & Stratton, Inc. 1956.

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Diagnosis and Typing in Leptospirosis, Report of a Study Group. World Health Organization: Technical Report Series, 1956, *No.* 113. Pp. 11. 1s. 9d., $0.30, Sw. fr. 1. Also available in French and Spanish. Local Sales Agent: Van Schaik's Bookstore (Pty.) Ltd., P.O. Box 724, Pretoria.

GLOMUS JUGULARE TUMOUR

A CASE REPORT

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Since Rosenwasser[1] first described the fascinating glomus jugulare tumour in 1945 as a 'pathologic curiosity', about a hundred cases have been reported in the literature.

A case of glomus jugulare tumour in an African female, is reported below. It is the first case of this condition to be recognized at the Groote Schuur Hospital.

CASE REPORT

L.H., a Damara female aged 29, was referred to Groote Schuur Hospital from Windhoek on 28 September 1956.

Four years ago she noticed that she was becoming deaf on the left side. During the same period she had episodes of tinnitus and was able to hear her 'heart beat' in the left ear. For 3 years she had been having vertical headaches and a persistent throbbing sensation on the left side of the head. She also noticed that her voice was becoming weaker and hoarse and that the left side of her tongue had become wasted. For the past 2 years a squint developed with double vision on looking to the left; she developed irritation of the pharynx and dysphagia for solids, and noticed that the left side of her neck had become wasted. Her family history revealed nothing of note.

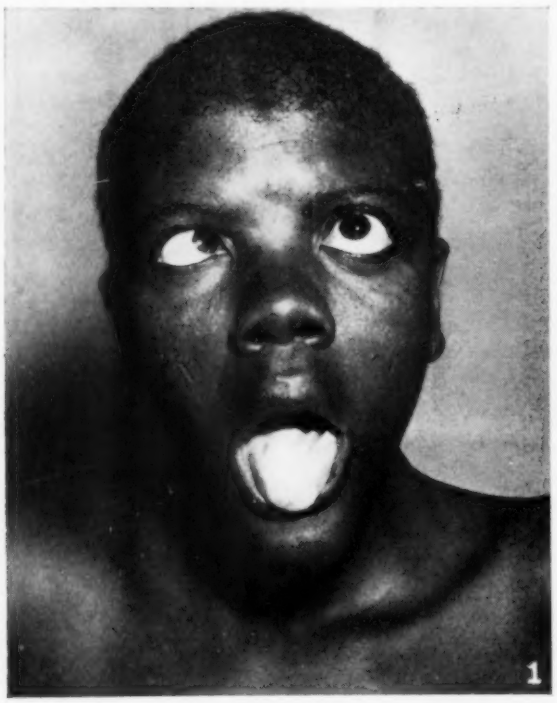


Fig. 1. Paralysis of abducent nerve, accessory nerve and hypoglossal nerve on the left. Patient is shrugging the shoulders and looking to the left.

On examination paralysis of the left 6th, 9th, 10th, 11th and 12th cranial nerves was evident (Fig. 1) with partial deafness on the left. A systolic bruit was audible over the left mastoid region. The left external auditory meatus was completely obstructed by a greyish fleshy polypoid mass. No other abnormal physical sign was detected.

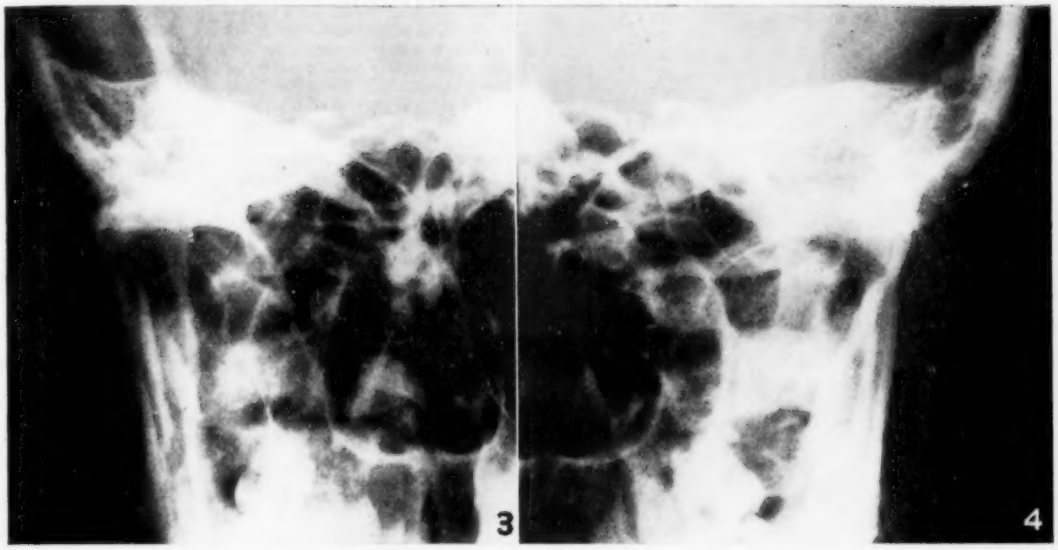
The results of lumbar puncture and examination of the cerebrospinal fluid were normal.

X-ray of the skull showed erosion of the base of the skull in the region of the foramen lacerum on the left side and of a substantial portion of the left side of the basi occiput. The erosion was not associated with bone reaction (Fig. 2). The left mastoid air cells showed decreased translucency. The mastoid process was not expanded. The appearance was that usually associated with chronic mastoiditis (Figs. 3, 4, 5 and 6).

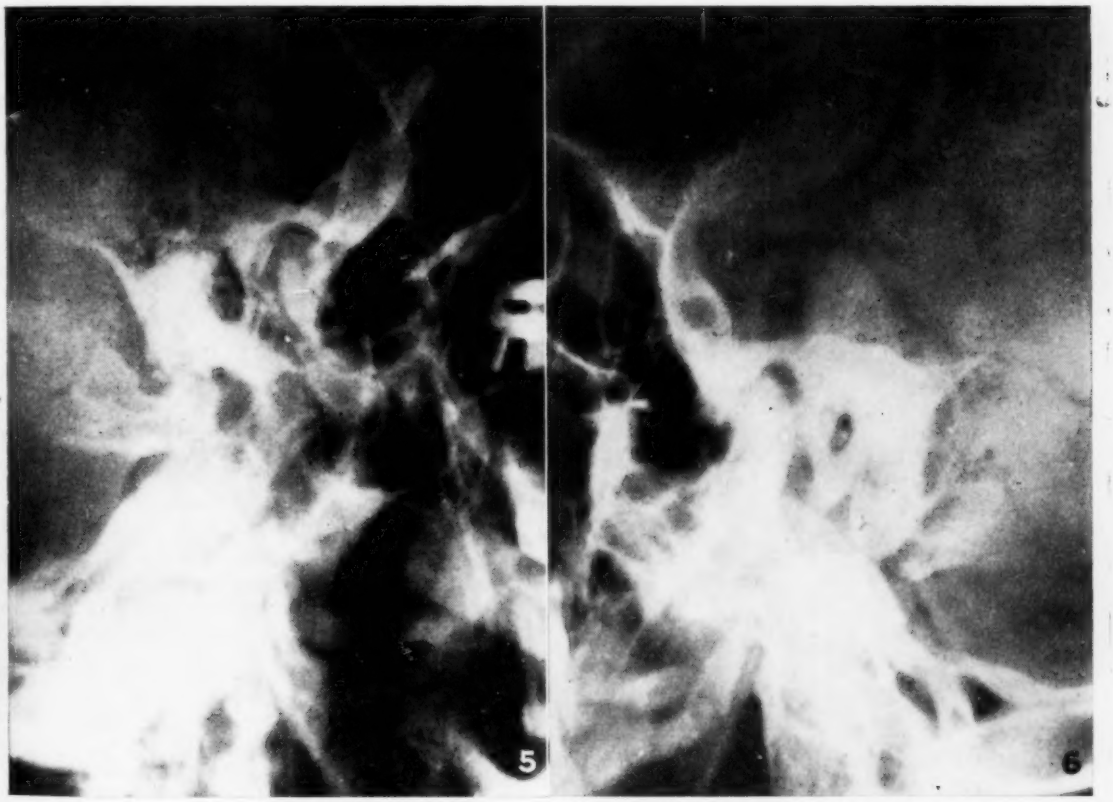
The arteriogram of the left internal carotid artery and of the left vertebral artery including the posterior cerebral branch did not show any pathological change.

Biopsy. On 2 October 1956 a biopsy of the polyp in the left ear was taken. It was followed by marked haemorrhage, and haemostasis was secured by inserting bipp gauze into the external

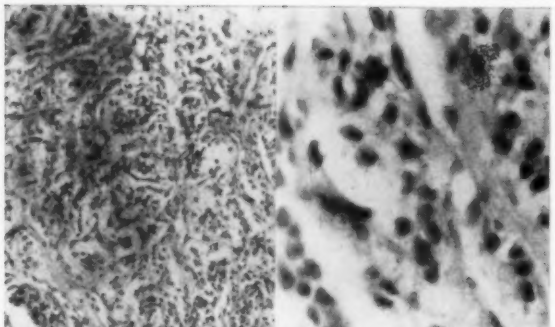
Fig. 2. Base of skull showing erosion of skull in region of the foramen lacerum on the left side and a substantial portion of the left side of the basi occiput.



Figs. 3 *and* 4. Stenver's views of skull, showing decreased translucency of left mastoid air-cells. The mastoid process is not expanded.



Figs. 5 *and* 6. Schuller's views of skull, also showing decreased translucency of left mastoid air-cells.



Figs. 7 *and* 8. Tissue consists of fairly small cells with spindle-shaped or ovoid, rather dark-staining, nuclei and ill-defined cytoplasm. These cells resemble endothelial cells. Haematoxylin and eosin.

auditory meatus. On histological examination the polyp is seen to consist of fairly small cells with spindle-shaped or ovoid, rather dark-staining, nuclei and ill-defined cytoplasm. These cells bear a resemblance to endothelial cells (Figs. 7 and 8). The tumour has a distinct alveolar pattern, best seen in sections stained for reticulum, the cells occurring in small groups separated from each other by delicate fibrous stroma in which numerous thin-walled vascular spaces are seen (Fig. 9). The cells are fairly uniform in size and shape and mitotic figures are not seen. Two of the snips are partly covered by keratinizing squamous epithelium, and immediately beneath the epithelium is vascular granulation tissue superficially resembling a capillary haemangioma.

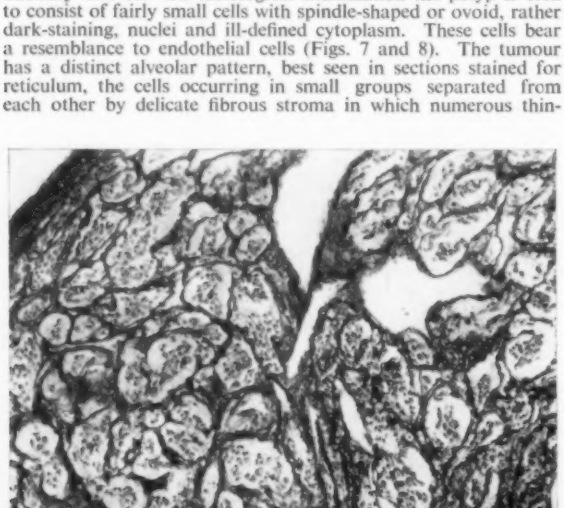


Fig. 9. Selective staining of the reticular network, shows that the cells occur in small groups separated from each other by delicate fibrous stroma, in which thin-walled vascular spaces are seen (Gordon and Sweet's method).

The general pattern of the tumour appears sufficiently characteristic to justify the diagnosis of a carotid-body-like tumour presumably arising in the glomus jugulare. Although the typical carotid-body tumour consists of large polyhedral cells, the present tumour closely resembles the angioma-like type of glomus jugulare tumour as described by Le Compte.[2]

Treatment and Course: The patient was submitted to a course of deep X-ray therapy: Three fields each 6 cm. circle. Factors F.S.D. 50 cm.; filter; thor; kV 220 ma. 15. Total skin dose to each field 4,050 r. Estimated tumour dose varies between 4,800 r. and 3,600 r. Although the local headache and tinnitus improved there has been no change in the physical signs to date.

DISCUSSION

The glomus jugulare, which was first described by Guild[3] in 1941, is part of the chemoreceptor system or non-chromaffin paraganglion system. This system is made up of a series of similar bodies which are named according to their anatomical position[4] (Fig. 10). From above downwards they are:

1. The paraganglion tympanicum closely associated with the tympanic nerve.

2. The glomus bodies found in the adventia of the jugular bulb, and occasionally in the course of Arnold's nerve. These bodies are found immediately below the bony floor of the middle ear; they are usually single but may be multiple; they consist of a flattened ovoid glomus, 0·5×0·25 mm., made up of blood vessels of capillary calibre with numerous epithelioid cells between the vessels. The innervation and blood supply of these bodies is the same as that supplying the carotid body, viz. the glossopharyngeal nerve and the ascending pharyngeal artery.

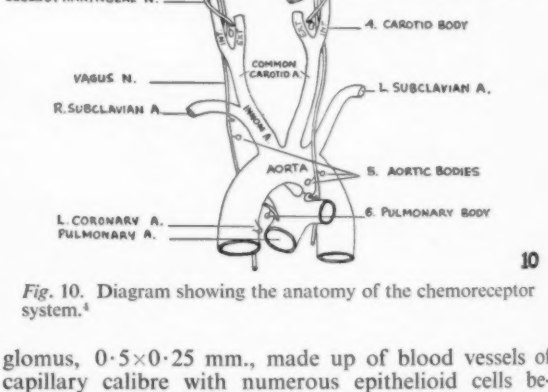


Fig. 10. Diagram showing the anatomy of the chemoreceptor system.[4]

3. Paraganglion intravagale, related to the ganglion nodosum of the vagus nerve.

4. The carotid body.

5. The aortic body.

6. The bodies related to the pulmonary arteries.

These bodies have a common origin, have the same histology, are contained in an extremely vascular stroma,

and are non-chromaffin staining. They have an intimate relationship with the glossopharyngeal and vagus nerves and do not secrete adrenaline. They appear to be concerned with the pH of the blood and to function as chemoreceptors.

Pathology

The glomus jugulare tumour is a relatively benign tumour, highly vascular and well differentiated. Indeed it has been postulated by Birrell[5] that it should be regarded as a hyperplasia rather than a tumour. About half the tumours arise in the adventia of the dome of the jugular bulb and the remainder originate from a glomus body within the temporal bone. Irrespective of the point of origin the tumour spreads radially in one of 2 ways.

1. Progressive expansion in the middle ear, with bulging of the drum, which is destroyed, and a granular mass then protrudes into the external canal, presenting as a polyp.

2. The tumour extends medially along the undersurface of the petrous bone, with bone destruction, and involves the structures in the jugular foramen (9th, 10th and 11th cranial nerves) and the anterior condylar foramen (12th), and *via* the foramen lacerum anteriorly in the middle fossa of the skull (5th and 6th nerves). Sooner or later it invades the tympanum through the floor and involves the 7th nerve and labyrinth. Ipsilateral cerebellar signs are sometimes present. Pyramidal disturbances, sensory disorders and raised intracranial pressure are rare.

Although there may be extensive invasion locally they very rarely metastasize.[6]

The glomus jugulare tumour morphologically resembles the carotid body tumour and the two lesions have been reported to have occurred in the same patient.[6]

Histologically there are nests of epithelioid cells, which vary in size and shape, in a vascular stroma. It is unusual to see mitoses, even in the most actively growing types.

Uniform large cells with well-formed blood vessels suggest a benign type, whereas more active growth is suggested by smaller cells with darker nuclei, and the most activity is suggested by great variation in the size of cells, with hyperchromatic nuclei. The fundamental pattern is best brought out by silver impregnation of the reticulum.

Le Compte[2] divides these tumours into 3 groups, viz. (1) a type reproducing the normal structure of the glomus jugulare, (2) an adenoma-like type, and (3) an angioma-like type.

In poorly preserved specimens the epithelioid cells may become inconspicuous owing to shrinking of the cytoplasm and pyknosis of the nuclei, which may lead to an erroneous diagnosis of a vascular tumour or inflammatory granulation-tissue. Another source of error results from submitting for histology a superficial portion of the tumour, which will only show granulation tissue.[11]

Death results from (*a*) operative attempts at extirpation of the tumour, or (*b*) intracranial extension of the tumour and involvement of the vital structures.

Etiology

Age. The majority of patients are middle-aged, but cases have been reported in patients as young as 18 years and as old as 80 years.[7]

Sex. In contrast to carotid-body tumours, in which there is equal distribution of sexes, the glomus jugulare tumour is 5 times commoner in females than in males.[6]

Site. Of the tumours reported in the literature 3/5ths occurred on the left side, as in our case. A definite familial tendency has been described.[6]

Clinical Features

The patients usually have a long history of minor auditory symptoms.

They may present with one or more of the following:

1. A long history of deafness and pulsating tinnitus, which an intelligent patient may observe to be synchronous with the pulse.

2. A vascular meatal polyp presenting through the drum, and usually devoid of any nerve involvement. Local removal is associated with severe bleeding and recurrence.

3. A slowly progressive succession of palsies of the lower cranial nerves on one side. Of the cases reported 40-65% eventually have unilateral paralysis of lower cranial nerves.[4]

4. In rare cases the patients have symptoms of raised intracranial pressure.

X-Rays. Three radiological features are descibed:

1. 'Sclerosing of detail' in the mastoid region indistinguishable from that seen in chronic mastoiditis.[10]

2. Enlargement of the jugular foramen.

3. Erosion of the petrous portion of the temporal bone.

Angiography. Reports on the value of angiography vary in the literature. While Riemenschneider *et al.*[10] found vertebral angiography to be of value (displacement of the vessels indicating a space-occupying lesion in the posterior fossa), Henson *et al.*[7] reported disappointing results from both carotid and vertebral angiography.

Hooper[9] found angiograms of the external carotid artery and its branches to be of value in diagnosis. These angiograms may show:

(*a*) An increase in the number and size of branches of the external carotid artery passing to the region of the temporal bone.

(*b*) Greater density of the temporal bone as the contrast medium passes through.

(*c*) Small vascular channels around the fringe of the shadow of the temporal bone.

(*d*) The presence of a direct or an indirect arteriovenous anastomosis.

(*e*) Evidence of obstruction of the lateral or sigmoid sinus and reversal of flow in this venous channel.

He suggests ligation of the external carotid at the completion of the angiography to diminish the blood supply to the tumour. When a bruit is present this manoeuvre stops or reduces the noise.

Biopsy of Aural polyp. The only certain confirmation of the diagnosis is by histology, the features of which have been described. Biopsy is invariably associated

with marked haemorrhage, but haemostasis can be secured by a pack left in the external auditory meatus for 24-48 hours.

Since this tumour may present as an aural polyp it is suggested that all aural polypi should be submitted for histological examination in order that this condition may be diagnosed early.

The features which should arouse suspicion that one may be dealing with a glomus jugulare tumour are:

(*a*) A long history of auditory symptoms associated with the presence of an aural polyp without much evidence of chronic ear disease.

(*b*) When local removal of the aural polyp is associated with severe haemorrhage.

(*c*) An aural polyp with unusual lower-cranial-nerve palsies on the same side.

It is important to note that if an inadequate biopsy-specimen is taken, i.e. only the superficial portion of the tumour, the diagnosis may be missed because only granulation tissue may be seen.[11]

Differential Diagnosis

An early case with a bulging red drum may be mistaken for acute otitis media. Later, when the tumour presents as an aural polyp, it may be mistaken for a granulomatous polyp secondary to chronic otitis media. Those cases of glomus jugulare tumour on the under-surface of the petrous bone without signs of the tumour in the middle ear must be differentiated from other tumours at the base of the skull, viz. acoustic neuroma, meningioma, tumours of the nasopharynx, chordoma, carcinoma of the sphenoidal sinus, and metastatic carcinoma. The vascularity of the glomus tumour as may be seen on the angiograms may be of value in distinguishing it from the other lesions.

Treatment

At present there is no specific treatment for this tumour. The methods of treatment available are (1) surgery, and (2) radiotherapy.

Surgery: Attempts at total removal of the tumour by radical surgery is associated with a high mortality rate, because of the great vascularity of the tumour. Indeed, there is only one recorded case of survival after radical extirpation.[8] Where cranial nerves are involved there is danger to these nerves and to the vital structures in their vicinity.

Where the lesion is localized to the ear Capps[8] recommends removal of the local lesion by mastoidectomy and treatment of recurrences with X-ray therapy.

Two palliative surgical procedures are described:

1. Ligation of the external carotid artery, which may be helpful in suppressing a troublesome bruit.[9]

2. In cases where there are features suggesting encroachment on the posterior fossa (cerebellar or bulbar compression) a suboccipital decompression is recommended.[8]

Radiotherapy. Although X-ray therapy has no effect on carotid-body tumours, glomus jugulare tumours appear to be radio-sensitive and may be curable by that means.[12] The radiotherapeutic action on these tumours would appear to be mainly on the vascular supply (probably thrombosis of the vessels), whereby a reduction in the blood supply results, with consequent shrinkage in the bulk of the growth, and not by destruction of the tumour cells themselves.[8,4] Treatment with supervoltage apparatus is advised; 4,000 r. to 6,000 r. over 6 weeks is recommended.[8]

Prognosis

It has been said of patients with carotid-body tumours that their greatest danger lies in treatment rather than the disease itself. This statement may be applied equally well to patients with glomus jugulare tumours. In many cases the tumour outlives its host, who dies from other causes. Prognosis in untreated cases is reasonably good, since patients may live from 4 to 30 years,[7] even with multiple nerve palsies and gross destruction of the petrous temporal bone.

The cause of death is surgical intervention or intracranial extension wth involvement of the vital centres.

Where improvement is effected by any form of treatment there should be a regular and indefinite follow-up, for recurrences are very frequent.

SUMMARY

A case of glomus jugulare tumour is recorded in an African female.

The anatomy of the chemoreceptor system is described.

The pathology, etiology, clinical features, radiological aspects, diagnosis, treatment and prognosis of the glomus jugulare tumour are discussed.

I should like to thank Dr. N. H. G. Cloete (Superintendent of Groote Schuur Hospital), Prof. J. H. Louw (Head of the Department of Surgery) and Dr. J. Muir-Grieve (Head of the Department of Radiotherapy) for permission to publish this case; Mr. D. J. du Plessis for criticism and advice; Dr. L. Werbeloff for the report on the X-rays; and Dr. M. Sacks for the histological report. I am indebted for the clinical photographs to Mr. B. T. A. Todd and for the photomicrographs to Mr. G. McManus.

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DISTRIBUTION OF TYPES OF TYPHOID BACTERIA OVER AFRICA*

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Bacteriophages, or, as they are usually called, phages, are parasites of bacteria. They attack bacteria and multiply within them, and this causes the bacteria to lyse or disintegrate. Most phages are specific; that is, they attack bacteria belonging to one particular genus but have no effect on bacteria belonging to another genus. For example, a phage which attacks typhoid bacteria will not lyse dysentery bacteria and *vice versa*. Some phages are even more specific and will lyse some strains of a particular species and not other strains of the same species. This property has led to the use of phages for the classification of various kinds of bacteria into 'phage types'.

The method for the classification of typhoid bacteria into phage types was introduced by Craigie and Yen in 1938.[1, 2] These authors discovered a phage which they called 'type II Vi phage' and they used the word 'Vi' because it was specific for the 'Vi' or 'Virulent' form of typhoid bacteria. They also found that this particular phage was very adaptable and developed a high affinity for the strain of typhoid on which it was momentarily growing. Each time it was transferred to a new strain, it lost its affinity for the strain on which it had previously been grown. By growing this type-II Vi phage each time separately on different strains of typhoid bacteria, Craigie and Yen obtained 11 differently reacting phage preparations, all derived from the first phage preparation. These they called by letters of the alphabet, A, B, C and so on. It was found that these phage types were stable if kept under certain conditions. Strains of typhoid bacteria isolated from one and the same outbreak were always found to be of the same type. The method thus became of great epidemiological importance, and our laboratory applied it to South African strains of typhoid bacteria. Dr. Craigie very kindly sent us the material available at that time, which consisted of 7 type phage preparations and with this material we began phage typing in Pretoria in 1942. I published the results of this early work in 1947.[3]

In the meantime workers in other countries became interested in this phage-typing method and all who employed it found that it was an invaluable aid in the analysis and control of outbreaks of typhoid. It was realized that it should be placed on an international basis and in 1947, through the influence of Drs. Craigie and Felix, the International Committee for Enteric Phage Typing was formed in Copenhagen, as a special committee of the International Association of Microbiologists. One of the objects of this committee was to standardize the method so that results obtained throughout the world would be comparable. An International Central Enteric Reference Laboratory was established in London. In each country represented on the committee, a laboratory was chosen to act as the National Reference Laboratory for that country. The Institute for Pathology, University of Pretoria, was selected as the National Reference Laboratory for South Africa, under the direction of Prof. A. Pijper. In the bigger countries regional laboratories have been established under their National Reference Laboratory. In South Africa there are as yet no regional laboratories and all phage-typing is done by us at Pretoria. At first the South African Council for Scientific and Industrial Research provided the salary of a technical assistant for this work, but from 1950 this expense has been met by the Public Health Department of the Union of South Africa.

In 1947, when the International Committee was first formed, 9 countries took part. At the time of the second meeting at the Rio de Janeiro Congress, the number had increased to 24, and in 1953 at the Rome Congress 29 countries took part. It is proposed to hold the 4th meeting of the Committee at Frankfurt in 1957. The members of the Committee work according to methods laid down by Craigie and Felix[4] and use phage preparations complemented by their type strains, supplied by the Central Enteric Reference Laboratory in London. New types have been identified in various parts of the world and these have been included in the typing scheme, which now contains 39 types of typhoid bacteria. Before the meetings of the International Committee in 1950 and 1953, reports on phage-typing were submitted by the directors of the National Reference Laboratories and this material was reviewed and published by the late Dr. Felix.[5] Nicolle and Hamon,[6] of the *Institut Pasteur*, have also contributed data on the distribution of phage types in different parts of the world. With this data available, it is now possible to compare the phage types of typhoid bacteria found in different parts of the world. I here propose to compare the phage types of typhoid bacteria isolated in South Africa with those found in other parts of the continent of Africa. Many fascinating stories can be told of the important part played by phage typing in the tracing of typhoid carriers, but that aspect is outside the scope of the present paper.

Table I shows the distribution of typhoid Vi-phage types throughout South Africa, from 1948 to 1955. We call a focus a group of cases forming one outbreak. The figures for the number of foci are not as certain as the other figures, because it is very often impossible to say whether cases are related or not. From Table I it will be seen that the number of cultures we typed increased from 297 in 1948 to 1,298 in 1955. So far 14 types have been found, with type-A strains always in the majority. In 1948 and 1949 type-E1 strain held second place, but from 1950 onwards the group of strains labelled 'Untypable Vi strains' came second. This group comprises all the virulent strains of typhoid bacteria which show no reaction with any of the phage preparations available at present. Some probably represent new phage types not found elsewhere. We keep these strains going in the laboratory because we hope that

* A paper read at the meeting of the South African Association for the Advancement of Science (Section E), Nelspruit, July 1956.

TABLE I. DISTRIBUTION OF TYPHOID VI-PHAGE TYPES THROUGHOUT SOUTH AFRICA, 1948-55

Vi-phage types	*1948*	*1949*	*1950*	*1951*	*1952*	*1953*	*1954*	*1955*	*Total*
A	213 (148)	131 (119)	119 (104)	126 (120)	436 (404)	530 (497)	675 (671)	742 (726)	2,972 (2,789)
B1						6 (6)	8 (8)	6 (6)	20 (20)
D1	10 (8)	7 (4)	2 (2)	1 (1)	1 (1)	23 (23)	12 (11)	4 (4)	60 (54)
D4		1 (1)					3 (3)	1 (1)	5 (5)
D6		1 (1)							1 (1)
E1	28 (24)	29 (27)	16 (14)	18 (17)	33 (33)	68 (66)	102 (100)	106 (106)	400 (387)
F1	9 (9)	1 (1)	5 (4)	3 (3)	6 (5)	9 (9)	26 (26)	17 (17)	76 (74)
F2		1 (1)							1 (1)
G	10 (1)						1 (1)		11 (2)
L2						1 (1)			1 (1)
N								1 (1)	1 (1)
O	2 (2)						2 (2)		4 (4)
T	4 (4)	1 (1)	1 (1)						6 (6)
28	1 (1)						2 (2)	1 (1)	4 (4)
Untypable Vi strains	10 (10)	23 (19)	31 (23)	26 (20)	55 (55)	130 (123)	140 (138)	218 (204)	633 (592)
Degraded Vi strains	5 (5)		5 (5)	7 (7)	12 (12)	35 (35)	104 (104)	118 (118)	286 (286)
Untypable insuffic. Vi	5 (5)	6 (5)	8 (8)	6 (6)	15 (15)	36 (36)	63 (62)	84 (83)	223 (220)
Total	297 (217)	201 (179)	187 (161)	187 (174)	558 (525)	838 (796)	1,138 (1,128)	1,298 (1,267)	4,704 (4,447)

Unbracketed figures show number of cultures typed. Figures in brackets show number of foci.

when time and staff permit we shall be able to adapt the type-II phage to some of them and thus obtain new additional phage types, typical for South Africa.

So far, it has been found that throughout the world type E1 is the commonest Vi-phage type, with type-A strains holding second place. There are countries where other types predominate; for example, in France, Canada and parts of Italy, type-C strains predominated during the period July 1950-June 1953, and in Vietnam, during the same period, type M was the commonest type. Over the continent of Africa either type-A or type-E1 strains are always in the majority. Nicolle found that in Algeria, type-A strains came first and type-E1 strains second, while in Morocco and Tunisia there were more type-E1 strains than type-A strains. 52·87% of the strains from Senegal in French West Africa were type E1 and 21·83% were type A. In the Cameroons 78·75% of the strains were type A. Type-E1 strains were absent in this area, but were the predominant type for the French Congo. In the Belgian Congo type-E1 strains were predominant in the west and type A in the east, while in the centre the two types were present in equal proportions. 54·95% of the strains from Madagascar were type A and 36·03% type E1.

As I have said, type-A strains predominate over the whole of South Africa. Table II shows the phage types of strains received from different centres. We are indebted to the medical officers of health and pathologists for sending us these strains for phage typing. Although they were isolated at laboratories at the various centres mentioned in the table, a large proportion of the cases originated from the country districts which these laboratories serve and therefore the table does not mean that the cases occurred in the respective centres. It is curious that there is a much higher percentage of type-A strains occurring in Natal than in other parts of the Union. It would appear that this applies to East London and Port Elizabeth also, but the figures are too small to make sure. The percentage of type-A strains from Pretoria is 48·35, from Johannesburg 46·84, from Cape Town 60·19 and from Durban 76·28. This very high preponderance of one type over all other types obviously lessens the epidemiological value of the phage-typing method. To overcome this, Nicolle has devised a method for subdividing type-A strains into 9 sub-types.[7, 8] We have sent him numbers of type-A strains from South Africa for this further classification, with some interesting results. The distribution of the A sub-types is shown in Table III:

Out of 106 type-A strains from Natal, 105 proved to belong to the sub-type 'Tananarive'. This great uniformity indicates a common source of origin for these strains, but renders their classification into sub-types rather useless. Nicolle found that the sub-type Tanana-

TABLE II. REGIONAL DISTRIBUTION OF TYPHOID VI-PHAGE TYPES IN SOUTH AFRICA, 1948-55

Vi-phage type	*Bulawayo*	*Cape Town*	*East London*	*Durban*	*Johannesburg*	*Port Elizabeth*	*Pretoria*	*Total*
A	16	428	11	1,579	564	42	332	2,972
	(7)	(375)	(5)	(1,547)	(505)	(42)	(308)	(2,789)
B1		2			17		1	20
		(2)			(17)		(1)	(20)
D1	2	16		5	27		10	60
	(1)	(15)		(4)	(27)		(7)	(54)
D4		1			3		1	5
		(1)			(3)		(1)	(5)
D6				1				1
				(1)				(1)
E1	6	118		93	113	2	68	400
	(6)	(108)		(93)	(113)	(2)	(65)	(387)
F1		8			33		35	76
		(8)			(32)		(34)	(74)
F2		1						1
		(1)						(1)
G					11			11
					(2)			(2)
L2					1			1
					(1)			(1)
N				1				1
				(1)				(1)
O		2		2				4
		(2)		(2)				(4)
T		2					4	6
		(2)					(4)	(6)
28				1	3			4
				(1)	(3)			(4)
Untyp. Vi		67		151	208	12	195	633
		(64)		(149)	(194)	(12)	(173)	(592)
Degrad. Vi		41		118	103	5	19	286
		(41)		(118)	(103)	(5)	(19)	(286)
Insuff. Vi		4		113	80	1	25	223
		(4)		(112)	(78)	(1)	(25)	(220)
Total	24	690	11	2,064	1,163	62	690	4,704
	(14)	(623)	(5)	(2,028)	(1,078)	(62)	(637)	(4,447)

For brackets see note to Table I.

rive predominates in Madagascar. In other parts of the world a variety of his sub-types exists and the sub-division of strains from such areas has greatly aided in their differentiation. Nearly all the A strains from Johannesburg, Pretoria and Port Elizabeth belonged to this same sub-type Tananarive, but strains from Cape Town proved to be different. Out of 13 strains we sent to Dr. Nicolle for investigation, 8 were found to belong to the sub-type Tananarive and 5 to the sub-type ‚Maracaïbo'. Dr. Nicolle has found 2 strains of this sub-type among strains from French West Africa, but otherwise the sub-type is confined to Venezuela, the French Antilles and French Guiana. He thinks that the occurrence of this curious sub-type on both sides of the Atlantic means that it has been carried from Africa to the Caribbean countries by slave-trade ships. One type-A strain belonging to the sub-type Maracaïbo was isolated from a case in Pretoria, but the source of the infection was not known and it was not possible to ascertain whether the patient had been in Cape Town before she became ill.

TABLE III. DISTRIBUTION OF TYPE A SUB-TYPES (NICOLLE'S 'LYSOTYPIES AUXILIAIRES')

Sub-type	*Cape Town*	*Durban*	*Johannesburg*	*Port Elizabeth*	*Pretoria*	*Total*
Montréal			1			1
Coquilhatville					1	1
Tananarive	8	105	33	9	15	170
Douala		1				1
Maracaïbo	5				1	6
Léopoldville			1			1
Total	13	106	35	9	17	180

Other interesting types of strains which have been encountered in South Africa are types D6, F1, G, L2 and 28. Only one type-D6 strain has been isolated during the eight years under review. This was from an Indian, at Durban. Type D6 is a somewhat rare type which, however, is common in India and Indonesia and we may take it that this type of infection was brought to South Africa from the east.

Type-F1 strains are fairly common in South Africa and are of particular interest because they can be classified into 2 biochemical groups, those that ferment maltose and those that do not. This peculiarity of type-F1 strains was first reported by me in 1947, but has not been referred to by any other worker. Strains belonging to other types always ferment maltose.

Eleven type-G strains have been encountered among strains received from Johannesburg. Ten of these were

received together and were obviously from the same source. The 11th type-G strain was isolated 6 years later. According to Nicolle, this type is very rare in Europe and in Africa, but is regularly encountered in regions bordering on the Indian Ocean. Again the history of these cases is lacking.

Only one strain of type L2 was encountered. This is a very rare type and has only been found in North Africa, Great Britain and the Netherlands.

Type 28, of which 4 strains have been encountered in South Africa during the last 8 years, was first identified in Holland by Scholtens. Since then it has also been isolated in several countries in Europe, Asia and Canada.

The entire absence of type-C strains in South Africa is remarkable. This type is common in most countries and has been found by Nicolle in North Africa, French Equatorial Africa, the Belgian Congo and Madagascar. It has not been found to occur in Greece, India, Indonesia or Venezuela. Last year, while working at the *Institut Pasteur* in Paris, I assisted Dr. Nicolle and other workers in an investigation of type-C strains from Central Africa and Madagascar. We found that the type-C strains from these areas differ from type-C strains found elsewhere.[9]

In many countries the incidence of typhoid is decreasing, and this can also be said for the urban areas in South Africa. Present-day laboratory methods, which include Vi-testing for carriers and phage typing, have contributed to this decrease. As shown by the figures presented here, there is still a great deal of typhoid in the rural and Native areas of South Africa. Much of the value of phage typing is lost because of insufficient histories and other data about cases and carriers. There is a great need for more thorough investigations and note-taking and closer co-operation between health officials, hospitals and laboratories.

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FATAL SALMONELLA FOOD-POISONING FROM INFECTED BILTONG

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The setting of the drama was a little place called Jacobsrush several weeks before 15 August 1954, the Sunday on which the patients were admitted to hospital. Jacobsrush is a cattle outpost. The European in charge discovered a dead cow in the veld a few hours after its demise. There were some abrasions of the head and he considered this to be the cause of death. He skinned the beast and cut up the flesh, which he temporarily stored in the hide of the animal just slaughtered. The following day he decided to hang out a portion of the meat to make biltong while the remainder was used for barbecue, roasts, etc. At no time did the cattle man or his family suffer any ill effects from the eating of this meat.

When the biltong was partially dry it was hung up in a room ordinarily used for storing harnesses and reins. The cattle man subsequently gave a parcel of this biltong to one of his children, a little girl who was a resident of the hostel where the outbreak of food poisoning occurred. She kept the biltong in her locker at the hostel.

On the evening of 14 August soon after 'lights out' at 9 p.m. a raid was made by the children of the hostel on the locker belonging to the girl who owned the biltong and a feast made of its contents. Interrogation revealed that the locker contained nothing besides the biltong. During the night this girl complained to the superintendent that she was feeling nauseous. Sodium bicarbonate was given and no further complaints were received from her.

At 7.30 the next morning the authorities were advised that several children were ill. Vomiting and diarrhoea were the presenting symptoms. The district surgeon was called in and after questioning the children he decided that they were suffering from food poisoning caused by the biltong.

Four children, including the one who died, were admitted to Barkly West Hospital immediately. During the day 17 more cases were admitted. All were girls between 9 and 15 years of age. From inquiries made at this time it was established that the parents were not affected in any way by the biltong and meat from the dead animal but that 6 Natives who had eaten some of the meat developed a severe abdominal colic.

Course in Hospital

The course in hospital of the 21 cases admitted there was as follows:

First day. All the patients suffered from acute gastro-enteritis, passing frequent stools of greenish colour, watery and most offensive. The temperatures varied from 103 to 104°F and the pulse between 120 and 130 beats per minute. All complained of abdominal cramps and severe headache. They were flushed, apathetic and drowsy, and in the one fatal case there were signs of moderate collapse. The abdomens were soft, and tenderness was present in 2 cases only. Five patients showed moderate abdominal distension and complained of pain in the epigastrium and in the right and left iliac fossae. The tongues generally were moist and clean.

Second day. The signs and symptoms remained the same. The temperatures were in the vicinity of 103°F but it was 106·4°F in the fatal case. This patient died during the day.

Third day. The signs and symptoms were not greatly altered. The temperatures varied between 99 and 102·4°F. The headaches persisted and the stools remained as before. A few of the children were not quite so apathetic. At this stage one patient showed furring of the tongue, one a furred tongue with marked halitosis, and one nystagmus; one had severe pain in the right iliac fossa.

Fourth day. The number of stools were now reduced to an average of 6 per 24 hours, the vomiting diminished and the temperatures ranged from 99 to 101°F. Abdominal colic persisted in 2 cases only. The nystagmus had ceased in the patient in whom it had been present.

Fifth day. The stools were less frequent, still watery but not offensive. The temperatures varied from 98 to 100°F. Vomiting had ceased entirely but cramps and headache persisted in a few patients.

Sixth day. The stools were still watery and green but were reduced to less than 4 per day. Cramps were still present in a few cases. Appetites were improving.

Seventh day. In approximately half the cases the stools were semi-formed, though still dirty green in colour, and varied between 1 and 3 per day. The temperature and appetites were normal in most patients.

Eighth day. In half the cases the stools were now formed. A small number still had loose greenish stools. The temperature was normal in all of them.

Ninth day. The patients were looking well and bright. About half of them were discharged.

Tenth day. Only 3 of the patients remained in hospital.

Eleventh day. The last 3 were discharged.

The one fatal case (a girl aged 14 years) ran the following course: On admission to hospital she was passing profuse watery stools and vomited frequently. Temperature 99°F pulse rate 144 per minute, respiratory rate 28 per minute. She was pale, listless and apathetic but she responded to questioning. Late in the afternoon she became incontinent. Her temperature rose gradually and her pulse became weak and more rapid. The following day the respiratory rate increased further and she was in a state of collapse. She no longer responded to questioning but still responded to painful stimuli. Trismus of the jaw was present. She died at 9 p.m. from respiratory failure. The spleen, stomach and intestines were sent to the Bloemfontein laboratory of the South African Institute for Medical Research.

Two of the patients developed acute appendicitis and were soon afterwards transferred to Kimberley for operation.

Treatment

In a mass food-poisoning outbreak like this it is remarkable that only one case proved fatal, and the hospital staff must be complimented on so effectively coping with the sudden rush of a large number of desperately ill patients. The feeding, the bowel wash-outs, the provision of so many intravenous sets and the intravenous medication was really a remarkable feat. The treatment consisted of intravenous fluids, bowel wash-outs, stimulants where required, and feeds for those who could retain food. Later, as vomiting ceased, liquid feeds were increased and soft foods given in addition. On the first day penicillin was administered by injection, and thalazol, sulphaquanidine, tincture of opium and vitamin B6 were given orally. Coramine was used where indicated. Chloramphenicol was administered the same evening when Salmonella infection was suspected. From the second day a suspension of streptomycin and kaomagma and vitamin B-complex was given orally in addition.

Tetracycline was administered for a few days to those cases where the temperature did not settle once the vomiting ceased.

Bacteriology

Cultural investigation was commenced on the third day, when the following samples were received: (1) Faeces from patient G, (2) faeces from patient M, (3) spleen and intestine of A, (4) biltong found in the hostel, (5) biltong found at the farm.

No pathogenic bacteria were found in sample 2 (faeces from M) but from each of the other samples a salmonella was isolated. Two samples of biltong, marked A (from the farm) and B (from the hostel), were submitted to Dr. V. Bokkenheuser at the South African Institute for Medical Research, Johannesburg for confirmation and identification. From the biltong B was recovered (*a*) large motile aerobic Gram-positive bacilli belonging to the subtilis group, (*b*) Gram-positive cocci identified as *Streptococcus faecalis*, (*c*) *Bacillus coli*, and (*d*) a salmonella with antigens 6, 8: e, h= 1, 2—i.e. *S. newport*. This salmonella was the only organism isolated from the biltong A. The biltong was kept at room temperature and new cultures made after 4, 8 and 12 months, and the salmonella was recovered on each occasion. After a year a sample of biltong was sent to Dr. Bokkenheuser and he again recovered *S. newport*.

Further cultures have been made from the biltong during the past year, the last occasion being August 1956. On each occasion *S. newport* was recovered.

DISCUSSION

This is probably the first recorded report of salmonella food-poisoning caused by infected biltong. It seems probable that the biltong was prepared from an animal

that died of a salmonella septicaemia, the injury to the animal being incidental. A remarkable finding was the viability of the organisms over a period of 2 years in the presence of a high concentration of salt. Estimation of sodium and chloride indicated that the dried biltong contained between 10 and 12% sodium chloride.

SUMMARY

A salmonella food-poisoning outbreak due to infected biltong is described.

Viable salmonella is still present in the biltong after 2 years' storage at room temperature.

LIVER FUNCTION IN FATAL KWASHIORKOR

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The clinical aspects of the feeding of patients suffering from kwashiorkor with high-protein diets have been discussed by Brock *et al.* (1955), while the effect of these same diets on serial liver-function tests will be reported in a separate paper. (Kinnear and Pretorius, 1956*b*). Liver-function tests in 107 consecutive cases of kwashiorkor have been described (Kinnear and Pretorius, 1956*a*). We report here the findings in 19 fatal cases of the syndrome.

Materials and Methods

Venipuncture was performed in the external or internal jugular vein in all cases before treatment was started. The tests were all completed within 24 hours of drawing the blood.

Serum Proteins. Total serum proteins were estimated after the method of Weichselbaum (1946). Globulins were precipitated with 27·2% sodium sulphate and packed in the centrifuge with the aid of ether. An aliquot of the albumin solution was treated with Weichselbaum's reagent. Both total proteins and albumin were read in a spectrophotometer at 5,550Å against appropriate blanks. Standardized bovine albumin was used as reference standard.

Thymol Turbidity. The buffer was the standardized buffer of De la Huerga and Popper (1949). The turbidity was read in an Evelyn colorimeter calibrated with copper sulphate after the method of Ducci (1947).

Thymol Flocculation. After the turbidity was read the solution was poured into test-tubes and left undisturbed overnight. Flocculation was graded from 0 to ++++.

Serum Colloidal Gold. The method of Maclagan (1946) was followed.

Serum Colloidal Red. The method of Ducci (1947) was followed.

Serum Bilirubin. The method of Powell (1944) was used because of the smaller amount of serum needed and the greater intensity of colour produced in the lower ranges.

Bromsulphalein Retention. A dose of 5 mg. per kg. was used, with a 45-minute interval. Bromsulphalein was measured spectrophotometrically after the method of Gaebler (1945).

Results

Table I shows the results found in fatal cases of the disease. Table II, taken from a previous paper (Kinnear and Pretorius, 1956*a*), is included for comparison.

TABLE I. LIVER FUNCTION TESTS IN FATAL CASES OF KWASHIORKOR

	No. of Cases	Mean	S.D.	Range
Total protein, g./100 ml. ..	19	3·68	0·78	2·59-5·60
Albumin, g./100 ml. ..	19	1·58	0·43	0·96-2·36
Globulin, g./100 ml... ..	19	2·18	0·47	1·81-3·01
Thymol turbidity units ..	19	6·7	4·0	0-15
Thymol flocculation	19	—	—	0-++
Serum colloidal gold ..	19	—	—	0-3
Serum colloidal red	19	—	—	0-3
v.d. Bergh reaction	19	*	—	—
Serum bilirubin, mg./100 ml.	19	0·5	11·2	0·26-1·5
Bromsulphalein retention %	19	23·0	—	9·6-43

* Direct negative 18, direct positive 1.

TABLE II. LIVER FUNCTION TESTS IN KWASHIORKOR BEFORE TREATMENT

	No. of Cases	Mean	S.D.	Range
Total protein, g./100 ml. ..	107	3·74	0·584	2·90-5·38
Albumin, g./100 ml. ..	107	1·55	0·403	0·91-2·44
Globulin, g./100 ml... ..	107	2·20	0·485	1·53-3·25
Thymol turbidity units ..	107	5·1	4·1	1-18
Thymol flocculation	107	—	—	—
Serum colloidal gold ..	107	—	—	0-3
Serum colloidal red	107	—	—	0-2
v. d. Bergh reaction	107	*	—	—
Serum bilirubin, mg./100 ml.	107	0·44	0·28	0·38-1·2
Bromsulphalein retention %	51	15·0	9·25	2·4-40

* Direct negative.

DISCUSSION

Except for the bromsulphalein test, no significant differences could be found between the results in the two groups.

As part of an investigation into the effect of high-protein diets on the liver function, blood was withdrawn at 3-4 day intervals and the liver-function tests performed. It was found that of the 19 cases in which the patient died, there was a significantly higher bromsulphalein retention on admission than in the cases in which the patient recovered ($t=2·7$). In the recovery cases bromsulphalein retention was normal within

3-4 days, or at latest 6 days, after treatment had begun. In fatal cases the bromsulphalein retention was high at 3 days and remained high. Comparison of the retention of bromsulphalein at 3 days after treatment in the two groups shows a significant retention in the group which subsequently died ($t=6{\cdot}02$).

As the bromsulphalein test was the only test of definite prognostic value in kwashiorkor the reliability of the test in kwashiorkor is being further investigated using fractional clearances of bromsulphalein. The results will be reported in a separate communication.

SUMMARY

Fractionation of the serum proteins, the thymol turbidity test, the thymol flocculation test, the serum colloidal gold test, the serum colloidal red test, the v.d. Bergh reaction and the total serum bilirubin showed neither diagnostic nor prognostic value in fatal kwashiorkor.

The bromsulphalein test probably has prognostic significance if repeated serially.

We wish to thank Professor J. G. A. Davel for clinical facilities and financial assistance.

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THE ADVENT OF THE ATARACTICS*

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Throughout the ages man's greatest aim has been peace. Whether this refers to the individual or to the masses he has striven in no uncertain way to attain this object. In some fields he has been successful. He has fought wars to preserve peace, perhaps not always successfully, and as a result of his efforts to fight off his adversaries he has developed bigger and better means of defence and protection, such as atomic energy, which also promises great advances in all possible spheres of life and thus greater security.

In the same way as a nation seeks for security against its foes, so the individual in his search for comfort and freedom from pain, be it physical or mental, seeks the same goal on an individual basis. As a result of this search, we have in the past seen medicine and surgery develop dramatically. In order to achieve this development much research has gone on. We have seen anaesthesia develop to such an extent that it is today a fine art.

Originally surgery was a fearful and fearsome undertaking, performed mostly while the patient was in a drunken stupor. This resulted in the discovery of chloroform and ether and the perfection of modern techniques. In the infectious field, great gains have been made. Man's fear of the infectious diseases has led to discoveries far greater than many appreciate. The pioneer work of Jenner in smallpox, the inoculations against diphtheria and whooping cough and the recent developments in the field of polio prevention are examples. This work has one goal—freedom from fear of disease. In addition to these gains, we have seen the development of the sulpha drugs, and the advent of penicillin and the other antibiotic drugs, all increasing our security in the physical field.

ADVANCES IN PSYCHIATRY

In the field of mental disorders and disease much the same strivings and objects can be seen. Even in the times of the ancient Greeks, one is told of their attitude towards ataraxia, which means peace of mind; hence the reason why Fabing has christened the tranquillizing drugs now coming forth as the ataractics or peace-of-mind drugs. The ancient Greeks considered emotional tranquillity as of the utmost necessity in maintaining a general state of well-being.

Development in the treatment of mental disorder has been greatly hindered in its progress by the association of stigmata and ideas of demonism. This has handicapped mental health for many centuries and has kept psychiatric progress in the background until as recently as the last half-century when the teachings of Freud became popular and a more practical aspect towards mental disease began to develop. It can be safely said that only within the last quarter-century has satisfactory progress been made in this field and psychiatry started on its process of integration with medicine generally. The advent of the pharmacological and physiological approaches are largely responsible for this.

The use of drugs in the management of mental disorders is nothing new. In the history of ancient Greece, one reads of black hellebore, which was considered a specific drug, and that patients would journey to Anticyra, where this shrub grew in great abundance, to benefit by it. There have been numerous drugs in vogue to control mental symptoms, many of them dulling the faculties and often leading to addiction without curing the disease. They produced sleep and thus avoided exhaustion, but they cannot be looked upon as curative agents in the true sense, but merely as means of control. In addition, many of them have been dangerous. Included in these drugs we have morphine, the barbiturates, paraldehyde etc.

During its history psychiatry has been dominated by various philosophies and, depending on the philosophy adopted, all other possibilities were forgotten. The object was often to treat the patient and forget the disease. The modern trend is to diagnose the disease and treat it, and then to treat the patient. By this attitude all facets in the management of an individual are considered, including his disease and his social and personal well-being.

The modern advances in psychiatry—and it will not be out of place here to mention briefly matters of general interest pertaining to the therapies introduced during the 1930s—have for their aim these objects: the treatment of the disease, the treatment of the patient, his general management and his rehabilitation in the community. The treatments introduced during the 1930s have become known as the shock treatments—a very bad name—and they include insulin shock treatment, electro-convulsive therapy and convulsive treatment. In addition, Moniz introduced prefrontal leucotomy.

Insulin was the first of these treatments. It was introduced by Saboel in 1934, has stood the test of time, and is still recognized as the treatment of choice in schizophrenia. It has led to the necessity of accurate diagnosis, and it has pointed to the necessity of early treatment. This question of early treatment cannot be over-emphasized. The longer a condition lasts, the more likeli-

* An address delivered at the annual meeting of the South African National Council for Mental Health, Cape Town, 5 October 1956.

hood there is of destruction of a permanent nature. In fact, one may accept the Air Force terminology that eventually we reach a 'point of no return', and we should do all in our power to avoid this point, medically, socially and psychiatrically. We must avoid the stage where the relatives lose heart, where the patient cannot readily be absorbed into his home, and in industry. We must avoid the state in which the family has adjusted itself to the exclusion of the patient. The object therefore is to avoid chronicity, and insulin treatment—one of the great psychiatric events of recent times—has shown statistically the importance of this statement. The statement bears repetition that mental patients treated within the first 6 months of their illness have a 75% chance of returning to their homes and duties. The longer the period of delay the less chance of recovery.

The other great treatment introduced in 1934, by von Meduna, viz. convulsive treatment, is seldom used today; it has been largely replaced by electro-convulsive therapy. Von Meduna based his work on a theory that a convulsive process may have a beneficial effect in schizophrenia, and he accordingly assumed that there was some antagonism between epilepsy and schizophrenia. His assumption, although logical, was not proved correct in practice, and the convulsive therapies have proved a boon, not in schizophrenia, but in the depressive illnesses and particularly in the illnesses associated with the involutional period of life.

The electro-convulsive therapy was introduced by Cerletti and Bini in 1938. It has many advantages, but the name 'electro-convulsive' is bad—it should never have been called by this name. Its history is interesting. Cerletti, a pathologist, was originally interested in the effects of epilepsy on the brain, and later became interested in the treatment of schizophrenia. By chance he heard that hogs were slaughtered in the Rome abattoirs by electric current. He went there and saw that the hogs were clamped at the temples with big metallic tongs which were connected with an electric current of 125 volts. As soon as the current was applied the animals fell unconscious and a typical convulsion took place The animals were only stunned and rarely if ever died. On 15 April 1938 a disordered patient who was an engineer in Milan was sent for treatment. With great fear and trepidation they applied the first electrical shock treatment to a human being. The results were encouraging and within a very short time this treatment had become world wide. It is indeed of great value in maintaining mental equilibrium in properly selected cases.

Besides shock, other means of using the electrical current for the benefit of man have been introduced, such as electro-coma, on which much pioneer work has been done by Dr. Blignaut at Valkenberg Hospital, Cape Town. Electro-coma is a treatment of considerable value in cases of the anxiety states and drug addictions.

In 1935, Egaz Moniz of Lisbon introduced prefrontal leucotomy, thus bringing surgery into the psychiatric field. Great caution and careful selection are necessary and, though at one time the pendulum was swinging towards the over-use of surgery, the more conservative approach was finally accepted and only in very selected cases is surgery at present employed in psychiatry.

In this country, with its large non-European population and its frequent droughts, mental disorder is not uncommonly associated with malnutrition and vitamin deficiency, and here the work of the biochemist has been of the utmost value in restoring sick Africans to a healthy state of body and mind within the shortest possible time.

In addition to the procedures mentioned above, many other drugs and approaches have been used. We have seen the coming of malarial treatment of general paralysis of the insane and its effective replacement by penicillin. In fact one may safely say that G.P.I., thanks to penicillin, may become a historical curio.

THE ATARACTIC DRUGS

The foregoing is but a brief sketch of some of the procedures that we have employed to obtain mental tranquillity. The efforts have not ceased and progress has continued at an increasing *tempo* during the last four years. This brings me to the ataractics; I wish to discuss this subject because of the tremendous Press publicity that these drugs have gained both medically and generally. Millions amongst whom anxiety and fear exist are taking these ataractic drugs for the purpose of tranquillizing themselves. Nevertheless, the necessity of diagnosing and selecting treatment for the individual has been made very clear, and the advent of the ataractics must not blind us, and lead us into the belief that it is the answer to all our problems, that it is going to replace all that has gone before, and that all one has to do is to give the pills and the patients will get well. If this is the delusion we are turning to—and I am afraid there is such a tendency—we are in for a shock and a rude awakening.

I shall now discuss briefly the history of the ataractics, their nature, their effectiveness, their possible danger from the public point of view and what the Mental Health Societies can do to help.

The first of the ataractics—chlorpromazine—was introduced in 1952 by Delay and Denniker in Paris for psychiatric purposes. It had already been used in 1951 for other reasons—mainly as an adjuvant in anaesthesia. It has also been found of great value in midwifery and other aspects of general medicine. From the psychiatric aspect it has been used widely, and perhaps indiscriminately, throughout the world. Following upon chlorpromazine other ataractics have made their appearance. Reserpine or Serpasil, derived from the plant *Rauwolfia serpentina*, originally introduced for its ability to lower blood pressure, was found to be of great value in certain psychiatrical conditions.

Other ataractics have since come on to the market with the object of effecting tranquillity. Amongst these are drugs known as Suavital, Nutinal, Meratran, Equnal, Pacatal, Aterax and Miltown. Each has its indications and uses and under controlled conditions should play an important role.

The main characteristic of these ataractics, though they differ in their chemical composition, is their ability in the appropriate setting to produce peace of mind. They ease tension and produce a state of somnolence without interfering with the mental content and activity. In this way they differ from the barbiturates and other well-known sedatives which, when they become effective, produce deep somnolence. Should the individual fall asleep under an ataractic he is as easily awakened as from normal sleep and does not go off to sleep again if he has any external interests at the time. Its greatest benefit is in states of tension and excitement, and it has been my privilege to see some dramatic results from its use. However, one has seen failures fairly frequently, and it is not out of place here to give the warning that they have not replaced the treatments previously mentioned and that they are not a panacea.

The rapid acceptance of these drugs can be shown by the fact that within 3 years of the introduction of chlorpromazine in the United States of America, 4,000,000 people had already had it prescribed for them. Much is still to be learned about these drugs, such as when and how to use them, but it can be said here that in addition to the points I have already made, they are playing and are going to play an increasing role in the increasing problem of geriatrics, or old age.

The following points are of interest mainly to those of us in the mental hospitals. Many of the effects have not yet been fully discovered, the statistics have still to be worked out, but there are obvious signs that can be observed. Many of the disturbed and restless patients who were kept in refractory wards are beginning to show a new interest, are becoming less destructive and taking an interest in occupation. Many patients who were once idle, who were perhaps considered dangerous, are now working, and working usefully. A steady metamorphosis is taking place in mental hospitals, which is attributable to the ataractics and must bring about a new respect for the nursing and other personnel in these hospitals, must raise the all-round status of the hospital itself, and perhaps go a long way towards solving problems of staffing. Probably in the near future fewer nurses will be required. More patients are going out on leave than was previously possible and perhaps fewer patients are being admitted, but this cannot yet be ascertained with certainty.

Still discussing the mental hospitals, it is necessary to consider the effect the ataractics may have on some old-established patients who have become so institutionalized that they will be difficult to rehabilitate. One patient in my experience, who before receiving the tranquillizer had shown little signs of improvement, responded dramatically to the treatment. She was well enough within a very short time, but it took at least 6 months, after much difficulty and persuasion, to get the relatives to accept the fact that she was well enough to live in the community. Their previous experiences had been so exhausting that their reluctance was justifiable. However, some time afterwards we received a letter from these diffident relatives informing us 'You will be pleased to know that Mrs. X continues to keep well'.

Debit Side. All this sounds very good. Now the question must be asked 'What of the debit side?' Under the controlled conditions of the hospital the debit side is effectively managed, the diagnosis, dosage, side-effects and complications are observed and studied by a trained and experienced personnel. This is not so in the outside world, and the time, I think, has come to issue a word of warning. I understand that such things as chlorpromazine parties are being held and that some have stated that even addiction is possible. This may or may not be so, but the indiscriminate use by the public at large of these drugs may lead to an increase in motor-car and other accidents. I say so because a common side-effect is an interference with coordination. A patient of mine, who was an expert pianist, complained that he found difficulty in playing some of the finer movements. This incoordination, which is sometimes quite marked, because of the excessive confidence that the drugs produce in some people, will make one readily appreciate the dangers and the necessity of good and proper control. The possibility of buying these drugs over the counter should not exist and I know that it is fortunately not possible with the products of many of the firms of high repute. Another danger of these drugs in certain conditions is that they increase depression and in a number of cases they can be held responsible for an increased suicidal tendency.

From what I have said thus far it is obvious that there is much to be said on the credit side and equally much on the debit side. I hope these few instances have made this plain. There is much still to be learnt about the uses of these drugs. It is obvious that they have not replaced the vanguard of the modern treatments, viz insulin and electroplexy, but they are useful adjuvants.

Anti-hallucinogens. Before concluding I would like to refer to the fact that some of the symptoms we see in mental disorders can, in certain conditions, be produced artificially by the use of drugs. Lysergic acid LSD 25 and Mesculine can produce pictures very similar to those we see in schizophrenia. As a logical consequence, substances have been looked for which would have a blocking effect on the action of LSD., and these are in the process of being experimented with. They are still not for general use and are being called 'anti-hallucinogens.' At Fort Napier we have been privileged to receive a supply of an anti-hallucinogen; we have only used it on a limited scale thus far and are not ready to comment, but we can say that a new vista is opening and that in time many of the problems facing us may be solved.

CONCLUSION

This brings me, perhaps, to the main object of my paper, the role the Mental Health Council has to play in the control of the developments taking place. The first object should be the establishment of more out-patient facilities. At present, with the exception of the few clinics in the larger University centres, where medical schools are well established, out-patient facilities do not exist and, were it not for the Mental Health Societies who organize clinics in their centres, such services would not be available. In this respect the societies are to be congratulated on their initiative, but these clinics should not be their main function. There are many disadvantages in clinics organized by the societies: (1) The non-availability of dispensers; (2) full clinical investigation is not possible and considerable delay may result; (3) checking on a patient's condition in case of an urgency is impossible, whereas a psychiatric out-patient clinic attached to a general hospital can always deal with any such emergency as it occurs. One of the primary objects should thus be the establishment of psychiatric out-patient departments with full facilities in every large centre.

The importance of diagnosis, and the importance of early treatment, is so obvious that it needs no comment. With the advent of the new treatments, the necessity for such clinics becomes intensified; the days of cautious pessimism and of very little or no treatment are past. The days of purely custodial care and the treatment of symptoms are rapidly disappearing, and because of the new era we have entered, the establishment of more out-patient clinics becomes mandatory. I feel that in the future, within the next 25-50 years, as new developments take place, we shall require fewer and fewer beds for in-patients, and I am confident that the time is not far off when the present problem of overcrowding of mental hospitals will be a thing of the past, not because sufficient hospitals will have been built, but because of the present developments in therapy.

The other problem that will face the societies to a much greater extent than it does today is the necessity for rehabilitation and of finding suitable occupations for many of the patients who will be kept out of our hospitals. However, in spite of the optimism I have expressed, I think we must temper our views by not over-glamourizing what can be done and what is being done; there are still many disappointments and many failures, and if we paint an unrealistic picture many people who are beginning to appreciate the value of psychiatrical medicine may lose faith, and we must therefore at all costs avoid exaggerated claims. This may result from an excessive enthusiasm over recent developments. Great as they are, we must not lose our perspective, and in any propaganda that emanates from our societies this point of over-enthusiasm must constantly be at the back of our minds. The demand for research must be as constant and persistent as it is for other diseases. The public have demanded research in every other field of human disease. They must be equally insistent in mental disease and, if they are, the main objects of the societies, viz. the conservation of the mental health of the community and the prevention and reduction of mental defects and disorders, will become a reality.

To summarize, the most important functions of the societies at the present time are: (1) To stimulate the authorities to establish more out-patient facilities; (2) to prepare far more rehabilitation work; (3) to avoid excessively optimistic propaganda; (4) and above all to demand more and more research.

A year ago when I addressed the National Council of Women in Bloemfontein, I expressed cautious optimism about the future. I have little reason to change that view-point and I consider that with the developments taking place, one can go forward with the thought that within the next 25 years mental disease, in whatever form it is found, will be much less of a problem than it is today and that Ataraxia will be found.

This talk was given with the kind permission of the Commissioner for Mental Hygiene, Dr. J. Vermooten, to whom my thanks are due.

PUBLIC OPHTHALMOLOGICAL SERVICE : A REPLY

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The reply of Mr. Coates[1] to an article[2] appearing under my name in this *Journal* has only just come to my notice, owing to the fact that I am no longer resident in the Union.

I would like to make it plain that the article in question was not one submitted by me to the *Journal* for general consumption, but a paper delivered at the South African Medical Congress in Pretoria in 1955. The Editor requested my permission to publish it in the *Journal*, which I gave together with the observation that I thought the nature of the paper was not such as would command much general interest, having been written largely to stimulate comment and observation on the part of the relatively small number of ophthalmologists practising in the Union.

I cannot say I am much impressed by what Mr. Coates has to say, and very likely he does not expect me to be. In the main he appears to agree with most of my contentions, which does not surprise me.

The title of my paper was not misleading at all. Careful perusal would reveal that it covers all aspects of ophthalmic practice pretty fully, but as every ophthalmologist knows, 'refractions' constitute the greater part of his work, and so special consideration has to be given to this problem. Mr. Coates remarks that it has been claimed that refraction is an exclusively medical act. Not by me. A refraction is simply a part of a routine ophthalmic examination, and this is very likely to entail considerations quite

outside the scope of the optician. The patient does not pay his higher fee for the refraction, but for the complete examination he receives. The bare refraction might be carried out by a non-medical person—*vide* my article. It may very well be that opthalmologists are more concerned with refractions than they were 75 years ago. Obviously and rightly so, since it has been amply demonstrated by experience that refractions are *ideally* carried out by medical men.

Comments on Mr. Coates Observations

My estimate that 90% of Natives of less than presbyopic age who wear glasses, do so for show, is *not* wide of the mark—though I freely concede that the figure might be 95%. I have conducted out-patient clinics for non-Europeans for some years, and Mr. Coates must please allow me to draw the inevitable conclusions from what I have seen. Refraction curves differ very markedly from those of the European in that, while the number of persons having a high refractive error is much the same in each case, in the Bantu there are far fewer with moderate errors. I should perhaps make it clear that I regard any young adult wearing 0·5 spheres or 0·25 cyls. for constant use, as wearing glasses for show in most cases. If Mr. Coates disagrees with this point of view, he is of course welcome to his opinion.

Ophthalmology attracts a relatively small number of devotees because it is not every doctor's 'cup of tea'. Something more than 50% of an ophthalmologist's time is taken up with routine examinations (including refractions), and not every one likes this kind of work. One wonders what on earth attracts so many people to the practice of optometry, if I have the word aright, which is 100% routine and entirely bloodless. In any case why should access to blood make a speciality more attractive? Does a psychiatrist for example have a particularly bloody existence—and I am not trying to be funny?

What's in a Name?

My dictionary describes an optician as 'a dealer in spectacles or optical appliances' and this definition is good enough for me. If Mr. Coates wishes to adopt the definition recently adopted in the legislature of Georgia, USA, which regards an optometrist as someone who may treat visual defects by means of orthoptic exercises, visual training, light frequency treatment, and goodness knows what else, then I prefer the older word, optician.

I did not say that cooperation between optician and ophthalmologist is 'too Utopian to happen', but that the two had not, so far been remarkable for an ability to see eye to eye. And this is true. I cannot agree that the part-time ophthalmologist would not be likely to be very efficient. In Great Britain there are many such persons doing useful and efficient work. In the same way that many G.Ps. have required a D.R.C.O.G. or a D.C.H. without thinking it necessary to describe themselves as gynaecologists or paediatricians, many of these part-timers have obtained a D.O.M.S. or a D.O. and in my view are more likely to be capable than a person who has an F.O.A. or F.B.O.A., even with honours. Deep knowledge of the subject would not be necessary, and not, as Mr. Coates says, 'out of the question'. Such a person already has an adequate knowledge of the medical background of ophthalmology because he is a qualified doctor. By 'refraction *en masse*' I simply mean an ability to cope accurately with a fair number of refractions at a session. At the moment I do 9-12 per session without discomfort. Even in South Africa quite a few people in my experience opt to attend the out-patient clinic of the hospital for their refraction, where the clinic system is perforce in operation, and even here they have a reasonable amount of time and care devoted to their 'individual' case. Mr. Coates has italics, though how a case can be other than individual, I cannot understand.

The supplementary Ophthalmic Service in Great Britain is a quotable example of clinic system which is attracting a great number of patients.* I work in it, so I know. For one thing the patient pays far less than if the same service were carried out by an optician. I do not know of the report of the Commission of Enquiry to which Mr. Coates refers, but I doubt if it is true to say that the Supplementary Ophthalmic Service clinics have 'have never caught on' or that they are cumbersome or unpopular. I find rather the reverse. Whether it is costly, is hard for me to estimate; it is an integer in the National Health Service, and though this is expensive as a whole, I should estimate that the Ophthalmic Service is one of the smaller drains on it's resources.†

The idea that at a clinic the ophthalmologist should see each patient initially, deal with pathological conditions, and consider the result of the refraction before the patient leaves is by no means fantastic—I have done it myself for years, save that I have done the refraction myself as well, this being the routine at all ophthalmic clinics to which I have been attached. The ophtahlmologist in my scheme is the senior partner, but will not do all the work—he would not do the refractions. Really Mr. Coates should read more carefully.

National Ophthalmic Treatment Board

To suggest that the N.O.T.B. scheme in Great Britain never met a public need is just not true and, if it was so unpopular, how did it come about that I, one of four opthalmologists practising in a town of 55,000 inhabitants in the South of England before the war, and a newly qualified specialist at that, regularly saw 70-80 N.O.T.B. patients per month? If the scheme 'just paid its way', that was all it set out to do, being a non-profit-making organization.

I will cling to my dictum that no-one financially interested in the supply of spectacles should be the final arbiter in a decision to supply them with all the tenacity at my disposal, because I am certain that this is the only way to stop the large amount of unnecessary and ill-advised prescribing that goes on—and not only in South Africa. As an example, I saw a patient not many months ago in South Africa, 28 years old, who had consulted a (qualified) optician because he had been having headaches. He emerged with two pairs of glasses, the first with +0·25 sph. right and left, and the other with +0·5 sph. right and left, the former for constant use, and the latter for close work. He was emmetropic and orthophoric. He was still having headaches. His G.P. cured them. This is no isolated instance. Another type of problem, met with on an average about once a week, is the presbyope who has become overcorrected owing to the diligent change every 2 years of a 'presbyoptic' correction first ordered at the age of 40, and who at 48 is labouring under a +2·5 addition One could go on giving examples. I do not make the smallest withdrawal from my very strong feeling that the public is paying more money than it should for many pairs of spectacles it does not require.

Legislation

I can find in my article no passage which indicates that I am against 'optometry legislation' The whole tenor of my feelings is to try and make legislation unnecessary. My suggested scheme would do just what Mr. Coates advises. It would improve the present service; it would not rile the public, because they would not be obliged to use it; it would not break the optician according to Mr. Coates himself (who maintains that the public would still prefer to employ him); and it would not for any reason that I can see result in a frustrated ophthalmologist, who would be able to see more patients and have less of his time occupied in the routine operation of sight-testing.

Alternative Proposals

The first two paragraphs of Mr. Coates' proposals do not merit any consideration, as has already been pointed out by Mr. Taylor[3] in the *Journal* of 10 November. Obviously the doctor in charge of a clinic must be responsible for all pathological conditions, and how, pray, can he know whether they are present without having a look? As well suggest that all patients attending a hospital must first be examined by a nurse, who could then call a doctor if she thought anything was wrong.

Finally one comes to the old chestnut whether opticians are thoroughly reliable in (*a*) recognizing and (*b*) referring pathological cases. In most cases, yes; but unfortunately Dr. Taylor's experience is not peculiar to himself. It is impossible to be skilled

* In 1949 there were 150 Medical Eye Centres in Great Britain; today there are over 270 and between 10 and 20 are being opened each year.

† Since writing the above I have learned that the Supplementary Ophthalmic Services accounts for 6% of the total expenditure of the National Health Service.

in the recognition of such cases without access to a large amount of clinical material in the teaching period. Where does the optician see this?

In my original paper I confined myself as far as possible to generalizations and set out my propositions as non-commitedly as I could, only permitting publication because I felt that I was making a constructive offer to opticians to cooperate more closely with the medical profession in the welfare of the public. I am well aware that many of my former colleagues thought I had put out my hand too far, and were not in agreement with even that degree of cooperation which I envisaged.

As far as I am concerned 'the correspondence is now closed'.

REFERENCES

1. Coates, W. R. (1956): S. Afr. Med. J., **30,** 1018.
2. Young, L. (1956): *Ibid.*, **30,** 704.
3. Taylor, I. B. (1956): *Ibid.*, **30,** 1094.

NATAL UNIVERSITY FACULTY OF MEDICINE AND THE DURBAN MEDICAL SCHOOL

On 24 January 1957 the Secretary of Education, Arts and Science directed the following letter to the Principal of the University of Natal:

'I have to draw your attention to the decision of the Government to introduce legislation to provide separate university institutions for non-Europeans, as announced by His Excellency the Governor-General in his speech at the recent opening of Parliament.

'One of the consequences of this legislation will be that the Medical School for non-Europeans will no longer fall under the control of your University. It is intended that the University of South Africa should become the examining body for the Medical School. Apart from the transfer of the control and the substitution of the University of South Africa as examining body, no radical changes are envisaged in respect of the Medical School.

'I regret that at the present stage I am unable to furnish you with further particulars regarding the proposed legislation. The object of this letter is merely to acquaint your Council with the decision of the Government in regard to the Medical School and to express the hope that it will see its way clear to cooperate with the Department in the transfer of the Medical School when the proposed legislation has been accepted.'

NATAL PROFESSORS' STATEMENT

The 7 full-time professors in the faculty of medicine of the University of Natal issued the following statement signed in Durban on 13 February:

'The University of Natal authorities requested that until the Special Meeting of the University Council had been held on 12 February 1957, we should refrain from making any public statement of our views on the intention of the Government to remove the control of the Faculty of Medicine from the University of Natal. We are now in a position to make some observations.

'When we joined the staff of the University of Natal to initiate this new Faculty, we did so because we believed that this University would ensure full academic development and the maintenance of a high standard of medical education. These objectives have in fact been achieved and the curriculum of study approved by the University Senate and the South African Medical and Dental Council has been framed on the basis of modern trends in medical education.

'The student body includes Africans from various states of Southern Africa, as well as African, Coloured and Indian students from widely scattered parts of the Union. Despite the initial suspicions of the student body and the non-European public generally as to the quality of a Faculty which did not include European undergraduate students, a basis for confidence has been developed. Within a short time, a considerable degree of trust has been established between staff and students.

'The foundation for this trust was provided by the inclusion of this Faculty within the academic structure of a recognized University.

'Without consultation either with the University of Natal or members of its academic staff, the Government has decided to change the status of the Faculty. This disregard of the University constitutes, in our view, a serious challenge to University education in general, and an affront to our University in particular.

'While there has been no Government statement as to which authority will in future assume control of our Medical School, it is significant that the University of South Africa has been asked to become the examining body and to award the degrees only. The University of South Africa caters for external students only. Furthermore, it has been reported in the Press that the relevant Bill is to be introduced by the Minister of Native Affairs, Dr. H. F. Verwoerd, and not by the Minister of Education, who until now has been the responsible Minister in respect of Higher Education.

'The Minister of Education has stated that the decision to change the status of this Faculty was reached on the basis of a Report by a committee of government departments. Neither the University authorities nor any member of its academic staff were interviewed by this inter-departmental committee. Equally disturbing is the Minister's refusal to make public this Committee's report.

'We regard this action as being particularly deplorable in the light of the history of the establishment of our Medical School and the tremendous efforts made by the University of Natal over the past ten years.

'When relationships between a Government and a University reach the stage at which there is no consultation on matters of vital concern to the University, the democratic foundation essential for the development of a true University education no longer exists. Assurances previously given are apparently no longer valid. Thus, at the official opening of the new medical school buildings on 5 July, 1955, the present Minister of Education emphasized that the Government would not interfere with the University's development of this Faculty.

'If transfer of the control of the Faculty, without any consultation with the University, is not regarded as interference, then indeed moral values have little further meaning. In these circumstances, there can be no foundation of trust between University academic staff and the authorities now governing higher education in the country.

'In the absence of this basic trust, and with the separation of this Faculty from a true University environment, we see little possibility for carrying into effect the initial ideals which motivated us in joining the University of Natal.'

The statement is signed: I. Gordon (*Dean and Professor of Pathology*), E. B. Adams (*Professor of Medicine*), Derk Crichton (*Professor of Obstetrics and Gynaecology*), Theodore Gillman (*Professor of Physiology*), A. E. Kark (*Professor of Surgery*), Sidney L. Kark (*Professor of Social, Preventive and Family Medicine*) and J. A. Keen (*Professor of Anatomy*).

CAPE TOWN PROFESSORS' STATEMENT

On 15 February the following letter was addressed by the Dean of the Faculty of Medicine of the University of Cape Town, Prof. M. van den Ende, and 10 other professors in the Faculty to the Dean of the Faculty of Medicine of the University of Natal:

'We, your colleagues, being the full-time professors in the Medical School of the University of Cape Town, wish to assure you of our sympathy and support in your protest against any attempt to remove your medical school from the control of the University of Natal.

'We feel with you that the Government's action is an affront to your university and a grave threat to medical education in South Africa.

'We earnestly hope that the efforts of your university to let wiser councils prevail will succeed.'

Besides the Dean's signature, the letter is signed by Professors C. E. L. Allen (*orthopaedic surgery*), J. F. Brock (*medicine*), F. J. Ford (*child health*), J. N. Jacobson (*radiology*), G. C. Linder

(*chemical pathology*), J. H. Louw (*surgery*), J. T. Louw (*obstetrics-gynaecology*), J. G. Thomson (*pathology*), A. W. Sloan (*physiology*), and L. H. Wells (*anatomy*).

RESOLUTIONS OF COUNCIL OF NATAL UNIVERSITY

At an emergency meeting of the Council of the University of Natal held on 12 February the following resolutions had been adopted:

1. That this Council opposes the decision of the Government to remove the Medical School from the control of the University of Natal as conveyed in the letter from the Secretary for Education, Arts and Science dated 24 January, 1957;
2. This Council further opposes the intention of the Government to remove all classes for non-European students from the control of the University of Natal;
3. This Council protests against the grave breach of University autonomy which is involved by these measures.
4. That the Chairman of Council, the Principal and Professor I. Gordon be empowered to seek an interview with the Prime Minister at the earliest opportunity.

RESOLUTION OF NATAL COASTAL BRANCH

The following telegram was received on 14 February 1957 by Dr. A. W. S. Sichel, Chairman of Federal Council, from the Natal Coastal Branch of the Association, following a meeting of that Branch that was held on 13 February to consider the proposed alteration in the status of the Durban Medical School.

'The following is a copy of a telegram sent to the Minister of Education Quote At an emergency meeting of the Natal Coastal Branch of the Medical Association of South Africa which was instrumental in the establishment of the Durban Medical School it was decided to protest most vigorously at your intention to remove it from the aegis of the University of Natal Stop Having due regard to the implications of the altered status proposed by the Government the Branch will find it impossible to cooperate in any way with any authority other than the University of Natal in the staffing of the Medical School Stop Copies of this telegram have been sent to the Prime Minister, Leader of Opposition and President of Medical Council Unquote Please pass this information to Parliamentary Committee'

RESOLUTION OF CAPE WESTERN BRANCH

At a meeting of the Council of the Cape Western Branch of the Association held on 15 February the following resolution was passed *nem con:*

'The Cape Western Branch Council strongly supports the Natal Coastal Branch in its action in regard to the transfer of control of the Natal Medical School to the University of South Africa'.

NEW PREPARATIONS AND APPLIANCES : NUWE PREPARATE EN TOESTELLE

Histacur. Messrs. Schering A.G., Berlin announce the introduction of a new product and supply the following particulars:

Histacur (1-p-chlorbenzyl-2-pyrrolidyl-methyl benzimidazole) belongs to the class of antihistaminic agents. It is an anti-allergic substance which in a low dosage combines high potency and protracted effect with excellent tolerance.

In therapeutic dosages Histacur causes no side effects. Sleepiness and dizziness do not occur. The patient's normal activities, his daily work or motoring are not impaired by administration of Histacur. It is also well tolerated by children.

Histacur is presented in ampoules of 10 mg., dragees of 20 mg., ointment of 2%, and syrup.

Sole Distributors: Arken Chemicals (Pty.) Ltd., P.O. Box 2268, Johannesburg.

* * *

SKF Laboratories (Pty.) Ltd. Following the acquisition by Smith Kline and French Laboratories of Philadelphia of the group of companies trading as A. J. White Ltd. and Menley & James Ltd., the name of the South African company M. & J. Pharmaceuticals (Pty.) Ltd., as from 1 April 1957, will be changed to SKF Laboratories (Pty.) Ltd., Diesel Street, P.O. Box 784, Port Elizabeth, telephone 8-6381. From that date this firm will no longer represent any producers except Smith Kline and French Laboratories. In the Central African Federation their products will be distributed by Geddes Ltd.

ASSOCIATION NEWS : VERENIGINGSNUUS

ANNUAL REPORT OF HON. SECRETARY OF CAPE MIDLANDS BRANCH

P. JABKOVITZ, M.D.

It is a pleasure once again to report on the affairs of the Branch, which remains an alive and healthy body, with our membership now standing at approximately 220. Our activities have been well sustained during the year—the monthly clinical and business meetings have been particularly well attended.

We were pleased to welcome to our clinical gatherings Professor Macafee from Belfast, Professor Goetz from Cape Town and Dr. Goldman from London. Further, the material produced by our local members and the manner of their presentation could vie with a clinical meeting held in any teaching centre.

On looking back over the year it is a pleasure to record that the Medical Wives' Association which began its life at the last Medical Congress held in Port Elizabeth, is still functioning and the ball that they organized in aid of our Benevolent Fund was an outstanding success, and showed a net profit of £168.

Our library is beginning to take shape; and with the completion of the new wing of the hospital we hope to move into new quarters where we can expand. The library promises to become an important feature in the life of our Branch. It is noteworthy that we have had no outside help in its establishment, but already we have had applications for the loan of periodicals from outside sources.

Perhaps the most outstanding event during the year was the decision of the Branch to support the staff of the Livingstone and Provincial Hospitals in the abolition of the Honorary System. There is no doubt that while it still exists it is looked upon as an anachronism by our fellow practitioners in the rest of the country.

We note with regret that our powers to elect representatives on the local Hospital Boards have been curtailed by the Administrator. It has been a matter of course to nominate our representatives. We now, unfortunately, have to submit names from which the Administrator makes a choice. Our lament is not that we have insufficient names to forward for nomination, but that our judgment as to who the most suitable persons are is not equally accepted as a matter of course.

The amount of clinical material available at the Livingstone Hospital is as good as that available in certain teaching hospitals and better than in others. We are therefore still persisting in our attempts to have postgraduate work here recognized on a year-for-year basis. Unfortunately, the Medical Council has coldly determined, irrespective of the quality of our teaching potentialities, to turn a blind eye to our request and have none of us. They refuse to consider changing their policy as laid down,

under any circumstances, and pointedly refuse to recognize the changing requirements of the postgraduate world. Our Branch Council is still endeavouring to explore every channel to have the matter remedied.

The Branch has shown considerable concern in regard to the distribution of polio vaccine during the year. Branch Council has made every effort to have the irregularities remedied. Unfortunately, some of these have been caused by individual members and very little could be done about it. The same position has been reported in other centres.

As an approach to the public, we enlisted the services of the Press. Our thanks are due to the 'Oosterlig' for the manner in which our statements had been put. Unfortunately, other sections of the Press chose to publish our statements in a manner that did no credit to the profession. Great care will have to be taken in the future if the Press is used again as a means of approach to the public.

As opposed to the policy of the majority in Federal Council our Branch, having familiarized itself with the working of open and closed panels in benefit societies, has come to the conclusion that it favours a limited panel as opposed to an open panel for very cogent reasons that help influence the continued growth of a healthy association.

Lastly, one recalls with pleasure the work that is being done for us by Head Office in Cape Town, to help solve the day-to-day difficulties as they arise and to collect our subscriptions. In particular, I wish to express our thanks to the Medical Secretary and the Associate Secretary for the helpful and prompt attention to all our requests for information and advice.

Our income from our share of membership dues amounts to approximately £200 and the cost of running the Branch is approximately £90. Our total savings have now reached the figure of £1,400, which itself brought us an interest of approximately £60 for the year. We thus end on a very healthy note and we shall be able to direct our efforts for the following year mainly to those improvements in our library to which we have looked forward for a number of years, and to make the Branch an intimate force in the daily life of our members.

MEDICAL CENTRE, CAPE TOWN

The following is a list of medical practitioners who will be occupying consulting rooms at Medical Centre, Heerengracht, Cape Town, as from 1 March 1957, together with their specialities (if any), suite numbers and telephone numbers. Most of the telephone numbers are the same as those which the doctors had previously.

Name	*Suite No.*	*Tele. No.*	*Speciality (if any)*
Dr. S. Abel	308	20554	Ophthalmology
Dr. S. C. Appleton	411	25369	Ophthalmic Surgery
Dr. F. W. Bekker	914	25726	E.N.T.
Dr. Hamilton Bell	812	35266	Orthopaedics
Dr. K. Brauer	601	31867 27835	Radiology
*Dr. S. Citron	307	29547	Anaesthesia
Dr. L. Chanock	1014	31070	Surgery
*Dr. M. R. Clarke	307	28884	Psychiatry
Dr. Harold Cooper	817	34351	Psychiatry
Dr. David Davies	805	30392	Plastic Surgery
Drs. E. C. Greenfield and W. G. Davis	703	28825	Pathology
Mr. J. N. de Klerk	628	30205	Urology
Dr. Jack de Villiers	716	21444	E.N.T.
Dr. T. J. Dry	805	25860	Medicine
Dr. D. A. H. du Toit	714	37816	Obstetrics and Gynaecology
Dr. A. B. W. Ferreira	1008	26898	Ophthalmology
Dr. Sylvia C. Gavron	609	20234	
Dr. M. Geffin	612	27896	
Dr. M. Glass	312	24092	
Dr. J. Munro Gold	911	35497	Orthopaedics
Dr. Leon Goldman	314	28400	E.N.T.
Mr. A. Gonski	602	34929	Neuro-Surgery
Dr. I. Grayce	906	23670 35995	Medicine
Drs. E. B. and E. G. Hacking	409	30758	Anaesthesia
Dr. H. L. de Villiers Hamman	705	25473	Neuro-Surgery
Dr. M. Helman	612	21726	
Mr. Percy Helman	210	29169	Surgery
Dr. J. Heselson	609	20234	Surgery
Dr. M. Horwitz	1010	31578	Medicine
Dr. B. Isaacson	208	22642	Medicine
Dr. H. H. Jacob	808	27466	Medicine
Mr. I. Jacobson	706	20508	Urology
Dr. M. Jordaan	712	20989	Thoracic Surgery
Dr. J. D. Joubert	405	24261	Urology
Dr. F. H. Kooy	606	28579	Neurology and Psychiatry
Dr. A. Landau	311	26294	Medicine
Dr. D. G. le Roux	714	30138	Medicine
Dr. N. Levy	612	21726	
Dr. M. Lipsitz	1014	22426	Obstetrics and Gynaecology
Dr. J. G. Louw	808	20211	Ophthalmology
Dr. J. MacW. MacGregor	606	28579	Neurology and Psychiatry
Dr. T. B. McMurray	409	26152 34527	Orthopaedics
Dr. D. V. Maytham	911	25980	E.N.T.
Dr. L. R. McQuillan	213	27319	Manipulative Surgery
Drs. A. A. Meyer, E. V. D. Burgh, K. V. O. Gunn and S. J. Sarif	205	23915 33567	Radiology
Dr. Maurice Meyerowitz	520	35815	
Dr. A. M. Michael	406	31490	Obstetrics and Gynaecology
Dr. H. Muller	812	31136	Medicine
Dr. W. H. Opie	815	22538	Paediatrics
Dr. F. F. Petersen and Dr. F. W Bekker	914	25725 25726	E.N.T.
Mr. W. L. Phillips	603		Thoracic Surgery
Drs. Jerome Rabkin, S. C. Shore and I. P. Jaffe	506	25469	Paediatrics
Mr. S. Scher	1014	25217	Urology
Dr. A. Schiller	406	28352	E.N.T.
Dr. L. Schrire	517	28327	Ophthalmology
Mr. W. G. Schulze	819	31322	Surgery
Dr. L. Stein	308	35420	Medicine
Dr. S. Stein	602	35583	Dermatology
Dr. N. Taylor	210	32966	
Dr. R. L. Tobias	516	20577	Medicine
Dr. H. T. Van Diggelen	908	34429	Physical Medicine
Dr. F. D. du T. van Zyl	403	20953	Surgery
Dr. J. J. W. van Zyl	405	34455	Surgery
Dr. I. Waynik	612	27896	

*From 22 March.

POLIOMYELITIS VACCINE TESTS : STATEMENT BY MINISTER OF HEALTH

The Minister of Health, Mr. J. H. Viljoen, in a statement made to representatives of the Press in Cape Town on 13 February 1957, described as 'broadly correct' a report that 80,000 doses of poliomyelitis vaccine made at the Poliomyelitis Research Foundation (South African Institute of Medical Research), Johannesburg were to be destroyed because they had failed to pass certain safety tests. Steps were being taken to import vaccine from the United States.

He said the vaccine was being imported because of the scarcity in the Union caused by the increase in the occurrence of poliomyelitis and the delay in passing batches of the vaccine as fit for use at the Poliomyelitis Research Foundation.

The manner of importing vaccine from the United States was receiving urgent attention. Negotiations were proceeding, but there was the cost aspect to consider. The Government would shortly provide the certificates necessary for the importation of the vaccine.

Dr. E. H. Cluver, Director of the South African Institute for Medical Research, in a statement to the Press, said the 80,000 doses likely to be destroyed was a month's supply. The doses were being re-tested but the chances were that they would not be used because if there was the slightest doubt about the vaccine they would be destroyed.

Dr. Cluver added that the importation of 240,000 doses of vaccine from the United States would keep the South African inoculation programme going, and allow the Poliomyelitis Foundation in South Africa a breathing space. Dr. Cluver could not say how much time would elapse before the vaccine was fully in production again. Dr. Cluver has since stated that the present pool of 80,000 doses is being retested and may still be available for issue shortly if proved satisfactory.

IN MEMORIAM

Dr. J. D. Allen, M.B.E., M.R.C.S., L.R.C.P.

Dr. R. A. Caldwell, of the Native Hospital, Blyvooruitsig, Transvaal, writes: Dr. J. D. Allen, who was Medical Superintendent of the Baragwanath non-European Hospital, Johannesburg, from 1947, died at Baragwanath, on 20 January 1957. He was born at Stanger, Transvaal, on 4 August 1900.

Dr. J. D. Allen

I have been associated with John Allen for close on 20 years, both in the S.A.M.C. and in civilian life.

Before coming to the Silicosis Bureau in 1937, he practised in Knysna for 15 years. Even today in the Knysna District his name is still honoured as one who helped the sick and the poor for little or no reward.

In the Union Defence Force, where he attained the rank of Lieutenant Colonel and was appointed a Member of the most Excellent Order of the British Empire, he commanded the 10th and 16th Field Ambulances and a Convalescent Depot. His officers and men gave him the affection and respect which his high sense of duty and justice commanded.

John Allen knew that his end was near. This is evidenced by a copy, in his own hand, of Tennyson's poem 'Crossing the Bar', which reads as follows:

'Sunset and evening star,
And one clear call for me!
And may there be no moaning of the bar,
Where I put to sea,

But such a tide as moving seems asleep,
Too full for sound and foam,
When that which drew from out the boundless deep
Turns again home.

Twilight and evening bell,
And after that the dark!
And may there be no sadness of farewell,
When I embark;

For tho' from out our bourne of Time and Place
The flood may bear me far,
I hope to see my Pilot face to face
When I have crossed the bar.'

This is an assessment of the character of a fine and courageous man. Jos Allen has gone but his high ideals and principles remain.

A letter from four Senior Native Clerks at the Baragwanath hospital is appended, which is a fitting tribute to a fine doctor and a great humantiarian.

Josiah Dolamo, Andrew Chakane, Thomas Kambule and Joseph Mokoele write. We, representing the non-European staff wish to offer our tribute in remembrance of the late Dr. J. D. Allen, the Medical Superintendent of Baragwanath Hospital for many years.

We remember him, not only as a man gifted with supreme qualities of integrity and leadership, but also as a great humanitarian to whom the lowest member of his staff was worthy of consideration irrespective of colour or creed. He served this community in a manner which was actuated by his Christian spirit and personality. His long service and wide experience gave him kindliness and a keen perception of the daily human problems which were part and parcel of his honourable office. He was an idealist and a pillar of honour.

His reputation commanded the confidence of all members of his team of workers, and caused him to be known with pride and affection as *Lethola Ramosa*, meaning 'the quiet, merciful and most kind-hearted one.'

Hasty decisions were unknown to him. This was exemplified in 1956, when he saved a precarious situation which arose out of a racialistic strike over the appointment of a compound boss boy. *Lethola Ramosa* appeared on the scene and, after parley, gave judgment which satisfied all parties.

We loved him and held him in great esteem because he reciprocated our love and trust. We deeply mourn his passing on. Death has robbed us of one who was trustful, unselfish and God-fearing in thought and deed.

In this their darkest hour of sorrow, it is our concerted and earnest prayer that God will give Dr. Allen's family courage and spiritual strength to face the irreparable loss they have sustained by the passing of a loving husband and father.

May His Soul Rest In Peace. *Pula*; *tsela tsoeu.*

* * *

Dr. Wolf Rabkin

Sister P. T. Kingma, Carinus Nursing College, Cape Town, writes: It is with great sadness that I write this token of affection and farewell in memory of our dear friend, Dr. Wolf Rabkin. The Principal, Sister Tutors and Student Nurses of the Carinus School of Nursing, and most especially those who have passed through his classes join in expressing to Mrs. Rabkin our deepest sympathy.

To each sick child who came under his care he gave wise, unstinting and scrupulous attention. Nothing was too much trouble, time was never too valuable should any small boy or girl need his care.

To nurses in general, by his teaching, example and patient instruction, he was a steady and determined influence towards raising our standards of nursing care and knowledge. He was a very fine teacher. His knowledge and wide experience he shared unstintingly with us, according to our understanding and needs. He taught more than paediatrics. He showed us something of

what fathers and mothers sacrificed and endured for their children, and a little of what to expect from life—a mixture of joy and sadness.

He had a true sense of values, of those things worth while, always moderate and tolerant. Yet withal, his was a happy, jolly courtly manner. We hope these seeds of example will blossom again in the young men and women whose privilege it has been, to know him.

And so we say farewell. Well done, true and trusted friend of the young.

PASSING EVENTS : IN DIE VERBYGAAN

Union Department of Health Bulletin. Report for the 7 days ended 7 February 1957.

Plague, Smallpox, Typhus Fever: Nil.

Epidemic Diseases in Other Countries:

Plague: Nil.

Cholera in: Calcutta, Madras (India); Chittagong, Dacca (Pakistan).

Smallpox in: Herat, Kabul (Afganistan); Rangoon (Burma); Ahmedabad, Allahabad, Bombay, Calcutta, Delhi, Lucknow, Madras, Quilon, Tiruchirappalli, Visakhapatnam (India); Makassar, Tjirebon (Indonesia); Baghdad, Basra, Mosul (Iraq); Kuwait; Chalna, Dacca, Karachi (Pakistan).

Typhus Fever: Nil.

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International Medico-Surgical Film Festival: The next Festival will be held at the Palais des Festivals, la Croisette, Cannes, France, on 9-14 June, 1957. Three categories of films will be accepted for competition, (1) medico-surgical instructional films; (2) public health films on the subject of the protection of mothers and infants. Particulars and application forms may be obtained from the Organizing Committee at the above address.

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Dr. L. J. A. Loewenthal, M.D., M.R.C.P., D.T.M. & H., of Johannesburg, has recently been elected as (1) a member of the British Association of Dermatology; and (2) an Honorary Member of the Dermatological Association of Australia.

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Dr. John C. Anderson, F.R.C.S. (Edin.) M.Ch. Orth. (L'pool) has commenced practice as an orthopaedic surgeon at 508, Southern Life Buildings, St. George's Street, Cape Town. Telephones: rooms 2-1226, residence 6-2655.

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Dr. A. S. Peden, M.D. (Edin.) has joined Drs. M. H. Finlayson and H. W. Clegg in practice as a Clinical Pathologist at 601 Dumbarton House and 808 Medical Centre, Cape Town. Telephone: Dumbarton House 2-6838 and 2-9515, Medical Centre 3-5832, Residence 69-8792.

CORRESPONDENCE : BRIEWERUBRIEK

POLIOMYELITIS RESPIRATOR CASES

To the Editor: Dr. J. Melvin,' in a letter to the *Journal* of 12 January 1957, states that, with the introduction of intermittent positive-pressure ventilation (IPPV) in the treatment of poliomyelitis respirator cases, Professor Lassen halved his former death rate. Dr. Melvin did not mention that Professor Lassen's original death rate for these cases in the Copenhagen epidemic of 1952 was as high as 87%. Thus the halved mortality rate is still by no means satisfactory. Further, a comparison is here being drawn between the early stages of the epidemic when, on Professor Lassen's own admission, few facilities and tank respirators existed, and the later stages when highly specialized teams were already organized. Thus the comparison and evaluation of the two methods of treatment is hardly a fair one.

The mortality rate for poliomyelitis respirator cases at the Boksburg-Benoni Hospital was 49%. I am certain that this figure could have been reduced with the use of the treatment as outlined in my paper[2] had there not been such a high incidence of aggravating factors such as long-distance travel. Some patients travelled hundreds of miles and arrived wrongly transported in the sitting position and with a history of having vomited on the way. Centralization of respirator units is ideal, but proper and swift transport of a poliomyelitis case, diagnosed early, to these units is of vital importance if the patient is to benefit.

Mortality figures as given by some of the British respirator units using IPPV are also not very satisfactory. Thus Kelleher and others report in the *Lancet* of 14 July 1956, page 68, that of 8 bulbospinal poliomyelitis cases requiring artificial respiration in tank respirators 2 died (25%) but of 5 such cases treated with the IPPV method 3 died (60%). These authors also report 32 cases of the spinal type treated in tank respirators with 1 death resulting (3%); but of 3 such cases treated with IPPV 2 died (67%).

In the USA there has been tardy acceptance of the advantages claimed for tracheotomy and IPPV, by far the most widely used method in that country being the tank respirator. Their results are at least as good as those achieved by any other method, including IPPV.

I fail to see why the most physiological method of artificial respiration as supplied by the tank respirator is described as having a 'deadly irresistible suction'. The suction within the tank is simply regulated so as to produce an inspiratory phase sufficient to produce adequate ventilation—no more, no less. Dr. Melvin agrees that the tank respirator is the apparatus of choice in the 'dry' case. He must surely mean that the salivary secretions if inhaled are 'deadly'.

The principal indication for tracheotomy is an upper respiratory obstruction which cannot be relieved by other means. Its use in bulbospinal poliomyelitis, where pulmonary oedema and secretions may develop primarily in the distal inaccessible parts of the respiratory tracts, should therefore be restricted. As mentioned in my paper,[2] in Professor Lassen's large series of 426 wet cases, there were 53% deaths in tracheotomized patients as opposed to 57% deaths in the untracheotomized. These figures do not reveal any appreciable advantage brought about by tracheotomy.

The one seemingly advantageous feature of the tracheotomy is that the trachea can be cuffed, thus sealing off the entry of foreign material. The disadvantages of the cuff, such as damage to the ciliated epithelial lining, stretching of the lumen and irritation, with infection leading to further increase in secretions, are well known. All anaesthetists will agree that a cuff must be deflated after a few hours; thus the necessity for constant vigilance and suction of oral and pharyngeal secretions remains.

Finally, may I quote Professor J. Trueta and Dr. M. Agerholm of Oxford, writing in the *Lancet* of 2 June 1956, page 859, on the subject of tracheotomy and poliomyelitis:

'It has been our unfortunate lot for the past 18 months to observe what a tragic complication a tracheotomy can be in a condition such as poliomyelitis, which may leave behind severe residual respiratory paralysis. Such patients have virtually no cough, and chronic pulmonary infection seems to be an inevitable consequence of the stoma. The infection reduces both the effective ventilation obtained by the residual respiratory power, and also the area of healthy lung tissue available for respiratory exchange. Consequently the recovery of spontaneous respiration is severely handicapped and, so long as the stoma and therefore chronic

infection persist, weaning from aid may be impossible. Yet closure of the stoma is fraught with danger because of the chronic infection in the absence of a useful vital capacity and cough. The patient is, in fact, trapped in a vicious circle; and the period of rehabilitation is either greatly prolonged by months or even years, or closure, and consequently rehabilitation, may have to be abandoned altogether, with the result that the patient may have to be condemned to permanent stay in hospital for the rest of his days. There are, in fact, a number of cases with severe paralysis now living in relative happiness at home for whom such a solution would have been impossible had a tracheotomy been performed in the acute stage; and some of these cases would have been in real danger of this complication had they fallen into less conservative hands at that time.'

Adequate ventilation remains the main essential in these cases but the methods whereby this is to be achieved, are, in my opinion, still open for discussion.

L. Kaplan
Assistant Physician
Boksburg-Benoni Hospital
Transvaal
7 February 1957

1. Melvin, J. (1957): S. Afr. Med. J., **31**, 44.
2. Kaplan, L. (1956): *Ibid.*, **30**, 1073.

INSURANCE AGAINST ACTIONS AT LAW: A WARNING AND AN APPEAL

To the Editor: Recently in the Supreme Court at Bloemfontein a case was brought against one of our colleagues. Although he did not lose the case, it left one with a great sense of frustration and indignation, that such things could happen to a doctor acting perfectly innocently and correctly in the course of his profession. It was the case brought against Dr. M. J. Goddefroy and the Voortrekker Apteek. In contrast to the initial publicity given to it by the Press, so little was said about the end that most people do not know what happened.

The action had been brought on the grounds that (1) a cataract had been caused by overdosage with 'Cafergot' and (2) that the patient had not been warned against overdosage, when taking the pills for migraine. After the case had been in progress for the better part of 2 weeks, the claimant withdrew her action. She expressed her regret for any inconvenience caused Dr. Goddefroy, and agreed to judgement in favour of the defendants, with costs. This was before a single witness for the defence had been called. The defendant, who had been her 'house doctor' and friend, was well acquainted with her financial position and had felt all along that he had little hope of recovering costs, even if he won the case. To save himself further expense he therefore accepted settlement on that basis. Unfortunately Dr. Goddefroy was inadequately covered by his insurance, which should be a warning to all of us. He had a balance of costs of about £2,500 to meet.

Here was a doctor who had done nothing wrong by the accepted standards of practice or acted carelessly in any way, yet who was landed with this crippling burden of costs. Do not let any of us imagine 'That can't happen to me'. The only precaution one can take is to be adequately insured with a body recommended by the Medical Association.

Realizing that Dr. Goddefroy had, most undeservedly, been landed with these costs, his Bloemfontein colleagues have spontaneously subscribed over £1,000 to assist him. This splendid effort for a comparatively small community is a very good sign of the essential solidarity of the profession.

We do not wish to establish a precedent. As I have said before, insurance is open to all, but we feel that in this case there were special features and it is incumbent on us all to rally to the assistance of this colleague. We therefore invite all colleagues to make at least token contributions to this fund. The Hon. Secretary of the O.F.S. and B. Branch, Dr. C. V. van der Merwe, United Building Society Building, Bloemfontein, will gladly receive and acknowledge all contributions.

Raymund Theron
27 S.A. Mutual Building
Bloemfontein
8 February 1957.

TOXAEMIA OF PREGNANCY

To the Editor: You very kindly published a long letter by me on this subject in October 1955. Since then I have had a great deal of correspondence on the subject with various medical superintendents of mission and other hospitals in the Cape, and also with private practitioners.

The information gained has been invaluable. May I make a *final* appeal to any colleague in South Africa who practises midwifery to send me information on the following points, immediately please:

(*a*) What is the average *diastolic* blood pressure of pregnant women under your care during 1956 at any stage of the pregnancy? This is a far more important question than most people realize.

(*b*) How many women did you deliver during 1956, and how many were toxaemic? Please state race of patients.

(*c*) Did you find that your toxaemic patients were as prone to postpartum haemorrhage as they were to antepartum haemorrhage?

(*d*) Did you notice any appreciable difference in the nature of 'toxaemic labours' as compared with normal non-toxaemic ones?

To many of your readers these questions may appear frivolous, but I can assure you there is no clarity amongst accoucheurs on these points.

It is my hope that within a reasonable time I shall be able to establish that the term 'Toxaemia of Pregnancy' is a complete misnomer.

Once more thanking you for valuable assistance.

1. De Villiers, D.P., (1955): S. Afr. Med. J., **29**, 1040.

BODIES FOR DISSECTION: THE LAW

To the Editor: Occasionally, one is asked directly by a patient, or through a medical practitioner, what is the procedure to be followed by a patient who wishes to bequeath his body for dissection for anatomical, pathological or any other scientific purpose.

It seemed to me that it might be of interest to medical practitioners to know the law in this regard as it applies in South Africa.

Under the Anatomy Act, dissection can only be performed at an authorized School. South African law requires that the next of kin comply with the terms of a will in regard to disposal of a deceased person's body. The patient or other person who wishes so to dispose of his body after his death should make a codicil to his will stating his wishes and indicating the medical school to which he desires his body to be handed over after death.

Clearly, facilities for immediate refrigeration or for the injection of preservative fluids after death must be available, and transport facilities to the medical school in question must be provided for, preferably in terms of the will.

It is also advisable that the patient or his legal adviser write to the Head of the Department of Anatomy of the Medical School to which he wishes his body to be sent, informing the Head of the Department of his address, the name of his doctor, and the contents of the codicil, and asking that timely arrangements should be made for the execution of his wishes.

G. A. Elliott
Professor of Medicine
Medical School,
University of the Witwatersrand,
Hospital Street
Johannesburg
9 February 1957.

‚MENEER' OF ‚DOKTER'

Aan die Redakteur: Met verwysing na dr. W. Steenkamp se skrywe[1] wil ek net daarop wys dat, net so eie as wat dit aan die Afrikaanssprekende is om elke persoon wat as geneesheer praktiseer as ‚dokter' aan te spreek, net so vreemd is dit om die spesialis-chirurg as ‚Meneer' aan te spreek.

Vir die van ons wat ons opleiding aan Afrikaanse Universiteite gehad het en in oorwegend Afrikaanse hospitale gewerk het, is die term ‚Meneer' vir die chirurg totaal vreemd.

Ook die aanspreekvorm van ‚Meneer' kan soms oordryf word, soos in die geval waar die niksvermoedende verpleegster of huisdokter die spesialis voor ander geneeshere as ‚Dokter' aanspreek en dan met 'n paar sarkastiese woorde daarop gewys word dat hy verkies om as ‚Meneer' aangespreek te word.

J. A. Engelbrecht
King Edward VIII-Hospitaal
Durban
5 Februarie 1957

1. Steenkamp, W. (1957): S. Afr. T. Geneesk., **31**, 64.